



Measuring the Effectiveness of Active Associate TFI Units

GRADUATE RESEARCH PAPER

June 2015

Kristina L. Lamothe, Major, USAF

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**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY**

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

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MEASURING THE EFFECTIVENESS OF ACTIVE ASSOCIATE TFI UNITS

GRADUATE RESEARCH PAPER

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Degree of Master of Science in Mobility Logistics

Kristina L. Lamothe

Major, USAF

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Committee Membership:

Lt Col Joseph R. Huscroft
Chair

Abstract

“A partner's different perspective is valuable, but the very fact that it is different means that it will require work, humility, time, and resources to incorporate that perspective. At times, this will require checking one's pride at the door.”

-- Ron Garan

The concept of Total Force associations has existed since the late 1960s. However, the Air Force has yet to realize the full potential of the Total Force Enterprise, specifically with regard to associations between the Active Duty and the Air National Guard. This is due in large part to poorly articulated objectives and inadequate metrics with which to gauge performance. The service has yet to overcome numerous roadblocks to unity of command between Title 10 and Title 32 authorities. As a byproduct, little emphasis on the deliberate force development of Airmen assigned to associated units has occurred. In today's ever-evolving, fiscally-constrained environment, this can no longer remain the status quo. The Air Force must focus on the integration of these disparate functions into a cohesive Total Force partnership to remain a viable fighting force. Besides the manpower and resources saved, associations afford both Active Duty and Air Reserve Component members the opportunity to gain a sound understanding of the strengths of each component and their unique contributions to the nation's defense. Future leaders will be better equipped to implement sound policies and procedures based on the best practices learned and observed through working in the intimate confines of Total Force partnerships.

Dedication

To my J's: Thank you for your continued support. I love you.

"Nothing in the world can take the place of persistence.

Talent will not; nothing is more common than unsuccessful men with talent.

Genius will not; unrewarded genius is almost a proverb.

Education will not; the world is full of educated derelicts.

Persistence and determination alone are omnipotent.

*The slogan 'Press On' has solved and always will solve the problems of the
human race."*

-- President Calvin Coolidge

Acknowledgments

“Never believe that a few caring people can't change the world.

For, indeed, that's all who ever have.” – Margaret Mead

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Lt Col Mike Fellona
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Col Anna Schulte
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Measuring the Effectiveness of Active Associate TFI Units

I. Introduction

“Trust is the glue of life. It's the most essential ingredient in effective communication.

It's the foundational principle that holds all relationships.” - Stephen Covey

General Issue

In 1970, Secretary of Defense Melvin Laird directed reform of the National Guard and Reserve. He believed combining the active and reserve components into a Total Force as the most cost effective means to achieve our national security goals. Secretary of Defense James R. Schlesinger formalized Secretary Laird’s initiative in 1973 stating, “Total Force is no longer a ‘concept.’ It is the Total Force Policy which integrates the Active, Guard and Reserve forces into a homogeneous whole” (Duncan, 1997). Today the message is still clear. Director of the Air National Guard, Lieutenant General Stanley E. Clark commented, “We are committed to ensuring we evolve in our total force integration with a synchronized team always ready to deliver unparalleled airpower anywhere in the world” (Air Force News Contributors, 2015).

In January 2014, the National Commission on the Structure of the Air Force released its report to the President and Congress. While non-regulatory in nature, the recommendations made by the commission highlight numerous benefits of Total Force Integration (TFI) from headquarters down to the unit level in terms of improved processes and increased efficiency of employment. The Commission stated “Classic and Active associate units have not achieved their full potential because they continue to maintain dual chains of command. This unnecessarily increases overhead and creates, at least, the potential for divided loyalties that hold back the

development of trust that should characterize a well-led and tightly bonded unit” (NCSAF, 2014). The Commission also noted “that fewer active associate units [with the ANG] exist despite the fact that the Air National Guard maintains more units than the Air Force Reserve” (NCSAF, 2014).

Also released in January 2014, was Air Force Guidance Memorandum to Air Force Instruction 90-1001. It provides the current direction for Total Force Integration Associations (TFIAs), which are “CSAF-approved operational constructs, which organize, train, and equip Air Force forces.” The Air Force has claimed success with Active Duty (AD) and Air Force Reserve (AFR) associations. However, the Air Force has simultaneously admitted it has not hit the mark as an institution in implementing this construct with Air National Guard (ANG) units due to many unique challenges.

As the Air Force’s operations posture evolves, the metrics used to measure performance need to be monitored and adjusted to ensure they remain relevant to current goals and objectives. When the latest push for integration began in the early 2000s, the Active Duty AF was looking for increased access to aircraft, hence a metric for Air Reserve Component (ARC) aircraft utilization rates. As the drawdown from thirteen years of war continues, the necessity of total force integration continues to evolve. Today, fiscal constraints have further highlighted the increased need for integration. Implementation of full spectrum metrics to assess the optimal utilization of active, Guard and reserve component forces is a must. When evaluating the effectiveness of active associate TFI units, it is imperative to meet the requirements of both the AD and ARC missions, as well as professional needs of the individual airmen assigned to integrated units. The question, however, remains as to what is the true outcome expected from Total Force integration.

Problem Statement

Air Mobility Command and, therefore, the Air Force is not realizing the full potential of the Total Force Enterprise due to: insufficient objectives and measures of merit; an absence of unity of command between Title 10 and Title 32 authorities; and lack of emphasis on deliberate force development.

Research Objective and Focus

The research focuses on AMC and its active associations, with a primary focus on ANG associations. The intent is to provide potential course corrections for current TFI units and a solid roadmap for future associated units such as the C-130J and KC-46.

Research Question:

- Do the current objectives and measures of merit adequately assess TFI in both mission execution and deliberate professional development of Airmen?

Investigative Questions:

- What, if any, operational issues have TFI units experienced?
- Do mission capable and utilization rates, deploy-to-dwell ratios, inexperienced aging rates, Advanced Academic Degrees (AAD) and Professional Military Education (PME) completion rates, retention rates, and promotion rates provide the right data to evaluate the effectiveness of a TFI unit?
- Should these metrics be re-evaluated and modified?

- What, if any, unity of command issues have TFI units experienced?
- How does squadron/group/wing leadership provide sufficient unity of command (vs. unity of effort) despite Title 10 and Title 32 restrictions?
- Would a dual-status commander resolve these issues?
- What, if any, force development issues have TFI units experienced?
- What steps are being or need to be taken to ensure AD Airmen are afforded comparable professional development opportunities to those not assigned to a TFI unit?

For resource-limited TFI units to be successful, the Air Force must revise its metrics, streamline Title 10/32 conflicts to facilitate unity of command, and consider improvements in force development.

Methodology

A two questionnaire Delphi study was conducted to answer the investigative questions of this research. Panel members consisted of former and sitting TFI squadron, group, and wing commanders from all three Air Force components. Complete copies of both questionnaires, as well as the quantitative analysis of the first questionnaire, can be found in the appendices. Chapter IV contains a thorough analysis of the second questionnaire.

Research Assumptions/Limitations

The policy directives and doctrine of Total Force Integration are vastly different from reality at the tactical level. These differences include expectations of what the metrics mean

between the components, the value placed on the unity of command with all three entities, as well as the emphasis each component places on force development.

One limiting factor in this research was finding a thorough, consolidated list of prior commanders at the squadron, group and wing levels. Heavy reliance on personal contacts helped spread the request for participation in the study. Of primary concern with this research was the level of ARC participation throughout. As stated throughout this paper, all parties need to be equally represented when making decisions that affect the operation of all components. Since only current or former commanders participated, the eligible pool of respondents was already severely limited; while anonymity was guaranteed, the fear of retribution always remains a potential barrier to participation. However, a more likely limitation on ANG participation specifically was competing demands for time and attention due to the part-time nature of many guard personnel.

Due to the vast differences between associations, the experiences and attitudes of each commander of the various units fluctuate greatly. Strong consensus on recommendations for improvement can be difficult to achieve due to these varying experiences. Additionally, similar beliefs and conduct (type A personalities as commanders) as well as group think were combated as much as possible by the use of the Delphi technique for this research.

Another significant assumption focused on ARC experience. While an absolute certainty in the past, it can no longer be assumed that ARC units have more experience than their AD counterparts. This may make force balancing an even more difficult endeavor as Total Force units continue to evolve.

Finally, from a technical perspective, words matter when discussing a controversial subject such as Total Force. Great care was taken to word the research questions in such a manner as to eliminate as much unnecessary bias as possible to avoid skewing the data collected.

Benefits and Implications of Research

Total Force units are the future of the US Air Force. Secretary of the Air Force Deborah James continues to advocate for a stronger Total Force. She is convinced the future of the Air Force includes greater reliance on the Air National Guard and Air Force Reserves (Air Force News Contributors, 2015). The KC-46 tanker will be on-line within the next year. Every proposed KC-46 squadron is slated as an associated unit of one form or another. It is imperative to the health of our force to revise and implement this concept properly.

II. Literature Review

“To acquire knowledge, one must study;

but to acquire wisdom, one must observe.” – Marilyn vos Savant

Chapter Overview

Resolution of many issues surrounding Total Force units may begin with a review of both Joint and Air Force guidance and doctrine, and then implementing concepts already detailed within those key documents. After all, doctrine is a body of carefully developed, sanctioned ideas established to provide a common frame of reference to solve military problems.

Reserve Component Defined

The term “Reserve Component” refers collectively to the seven individual reserve components of the Armed Forces. These include the Army National Guard of the United States, the Army Reserve, the Navy Reserve, the Marine Corps Reserve, the Air National Guard of the United States, the Air Force Reserve, and the Coast Guard Reserve. The purpose of these seven reserve components, as codified in 10 U.S.C. 10102 law is to

“provide trained units and qualified persons available for active duty in the armed forces, in time of war or national emergency, and at such other times as the national security may require, to fill the needs of the armed forces whenever more units and persons are needed than are in the regular components” (Kapp, L. & Torreon, B. S., 2014).

A Call for TFI

In January 2014, National Commission on the Structure of the Air Force released its report to the President and Congress. While non-regulatory in nature, the recommendations made by the commission highlight numerous benefits of Total Force Integration (TFI) from

headquarters down to the unit level in terms of improved processes and increased efficiency of employment. The Commission stated,

“Classic and Active associate units have not achieved their full potential because they continue to maintain dual chains of command. This unnecessarily increases overhead and creates, at least, the potential for divided loyalties that hold back the development of trust that should characterize a well-led and tightly bonded unit” (NCSAF, 2014).

The Commission also noted “that fewer active associate units [with the ANG] exist despite the fact that the Air National Guard maintains more units than the Air Force Reserve” (NCSAF, 2014).

Also released in January 2014, was an Air Force Guidance Memorandum to Air Force Instruction 90-1001, providing the current direction for Total Force Integration Associations (TFIAs).

“TFIAs are CSAF-approved operational constructs, which organize, train, and equip Air Force forces.” The memorandum describes the three types of associations: Classic, Active, and Hybrid. The most numerous is the Classic Association, in which a RegAF organization hosts one or more Air Reserve Component units. The Active Association is just the opposite; an ARC organization hosts one or more RegAF unit. Fewer Active Associations exist and are the primary focus of this research. A limited few Hybrid Associations exist. Hybrid Associations differ in that one component host shares a mission with two or more associates from other components. This could include a RegAF host with both an ANG and an AFRC associate, as just one example. For clarification, a reference to the host organization designates the organization with primary responsibility for mission accomplishment. This unit generally has the preponderance of assigned physical resources (aircraft, infrastructure, etc.). The associate unit uses the physical resources of the host organization to execute its mission. Associate units

vary in size from complete wing structures all the way down to flight or element size detachments, depending on assigned mission scope.

Another critical element to TFIA is the issue of Administrative Control (ADCON) and Operational Direction (OPDIR). AFGM 2014-01 states

“While associated organizations are by definition collated and functionally integrated to accomplish a common or shared mission, RegAF and ARC TFIA organizations will maintain separate ADCON over their respective forces to include distinct Unit Manpower Documents (UMDs), as well as distinct Designed Operational Capability (DOC) statements for organizations above element size...TFIA commanders delegate the authorities necessary to control, direct, and supervise functionally integrated personnel assigned, attached, or detailed to TFIA using OPDIR. OPDIR empowers supervisors to guide day-to-day operations by members of associated organizations regardless of component” (AFI 90-1001 AFGM 2014-01, 2014).

Air Force Policy Directive (AFPD) 90-10 outlining the Command Policy for Total Force Integration originally drafted in 2006, initially defines the framework of five basic models for integration: Classic Associate, Active Associate, Air Reserve Components (ARC) Associate, Integrated Associate, and Fully Integrated. The Classic and Active Associate definitions mirror those in AFI 90-1001 AFGM 2014-01. Further guidance explains Community Basing as an Active Associate variation where RegAF personnel garrison at an ARC location. Community basing locations lack the support functions traditionally found on at an active duty installation such as base housing, medical services, Commissary and Base Exchange facilities, and child development centers. Alternatively, these services are available in the local community. The ARC Associate is an integration of two or more ARC units with no RegAF presence. The Integrated Associate model is similar to the classic associate. The notable difference between them is members of all components contribute to one unit mission however the respective component provides administrative control and support. Finally, under the Fully Integrated construct “members from different components comprise a single organization, falling under the

same chain of command” (AFPD 90-10, 2006). To date, there are no Fully Integrated units due to restrictions in the current law. Figure 1 illustrates the current associations across the Air Force, which also indicates there are no Integrated Associates in AMC.

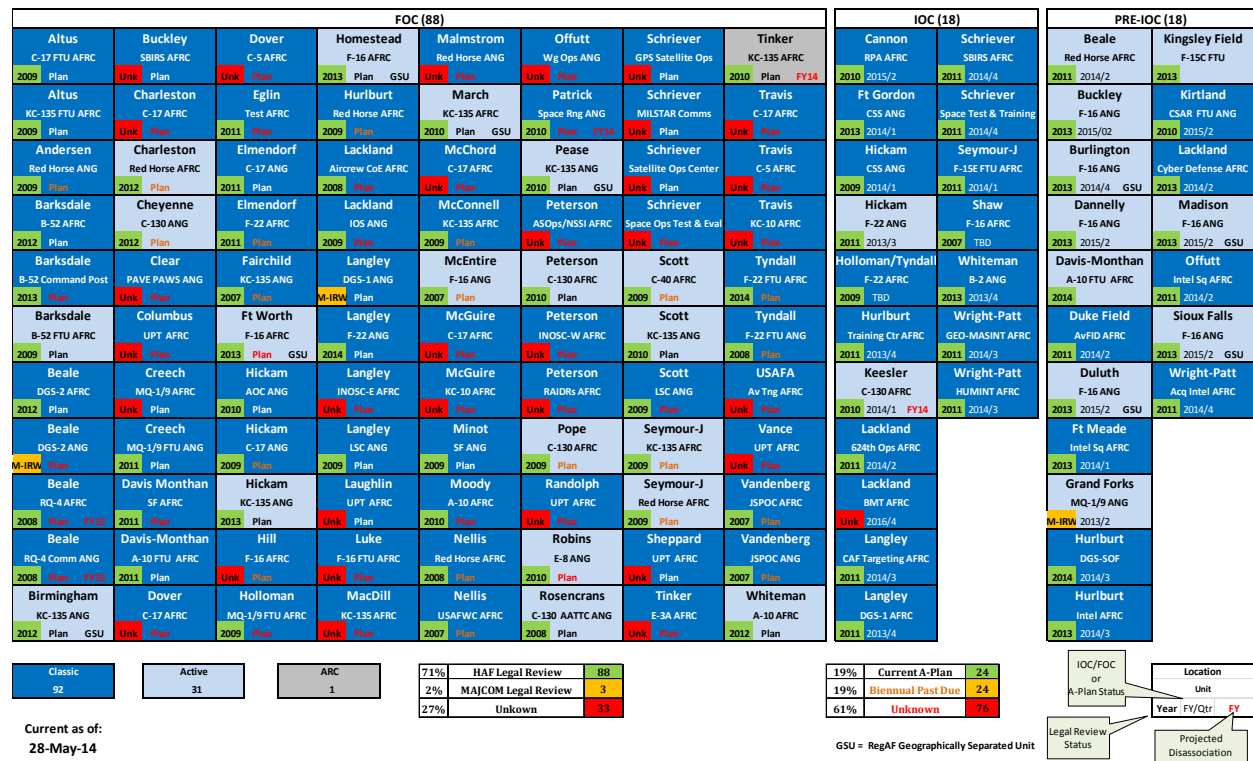


Figure 1. Current Total Force Associations

Air Mobility Command's TFI Objectives and Measures of Merit

Outlined in Air Mobility Command Master Plan 2012, released in November 2011, AMC stated four primary objectives with twelve measures of merit for TFI units:

Objective 1: Access to Iron

Active duty flying ARC aircraft for training and deployments

Measures of Merit:

1.1 Mission Capable Rates

1.2 ARC Utilization Rates

Objective 2: Increase Availability to Support Combat and Training Requirements

Additional ARC aircraft are made available to support deployed and training missions. Dwell to deploy rates at active associate units should be on par with their counterparts at non-active associate units.

Measures of Merit:

- 2.1 Maintain Parity for AD Deploy-to-Dwell Rates and Mx Deploy to Dwell Rates
- 2.2 ARC Volunteerism
- 2.3 Daily ARC Aircraft Deployed to Combatant Command
- 2.4 Operations/Mx Temporary Duty (Avg Days/Year)

Objective 3: Balance Aircrew Maintenance (Mx) Experience Levels Across the Total Force

Individuals assigned to active associate squadrons should gain experience and upgrade at the same or better than their counterparts in a regular active duty flying organization.

Measures of Merit:

- 3.1 Inexperienced Aging Rates for Ops
- 3.2 Inexperienced Aging Rates for Mx

Objective 4: Preserve Professional Development

Being assigned to a TFI unit should afford Airmen equal opportunities to meet their professional development gates as well as or better than their counterparts at non-active associations.

Measures of Merit:

- 4.1 Advanced Academic Degree Completion
- 4.2 Professional Military Education Completion
- 4.3 Retention Rates
- 4.4 Enlisted Promotion Rates

Wing Structures

One of the many recommendations made by the National Commission on the Structure of the Air Force included integration at both the corporate and wing levels. Figures 1 and 2 illustrate these constructs. The Commission also recommended the use of a dual-status commander, which will be discussed later.

Before deviating, it is important to understand what comprises a standard Air Force Wing. AFI 38-101 details a standard wing, which is the basic structure for all types of wings, from combat operations to air base or specialized mission wings. Most relevant in the description are the roles and responsibilities of the commander. The singular commander has

authority and responsibility to command the wing and focuses on primary mission execution. The commander delegates authority to subordinates as appropriate to accomplish their clearly defined responsibilities. This standard wing structure works to avoid duplication (AFI 38-101, 2012).

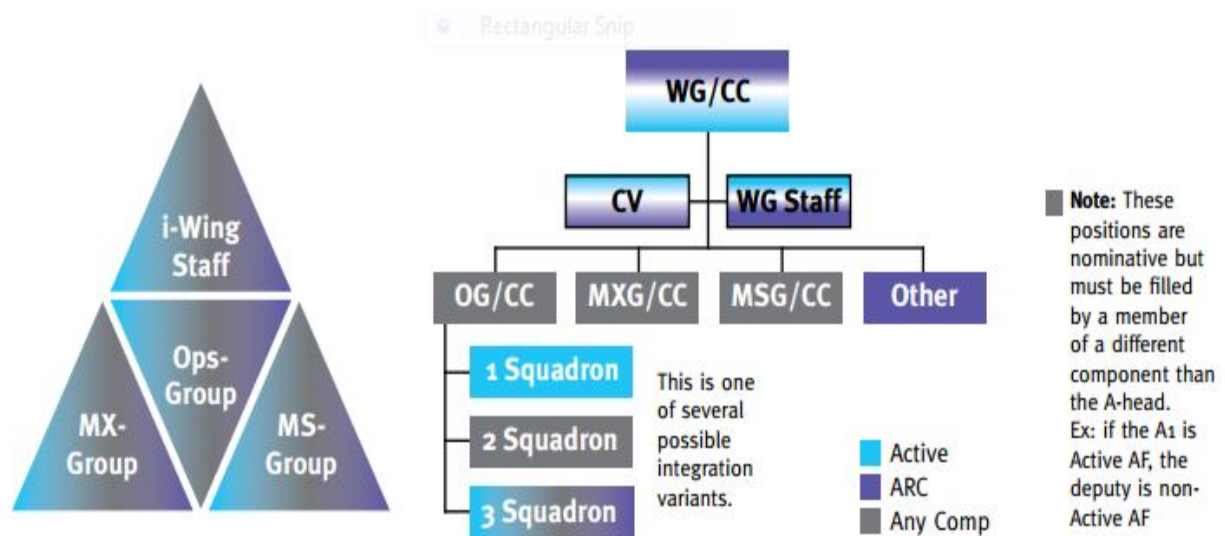


Figure 2. Potential Integrated Wing Leadership (NCSAF, 2014)

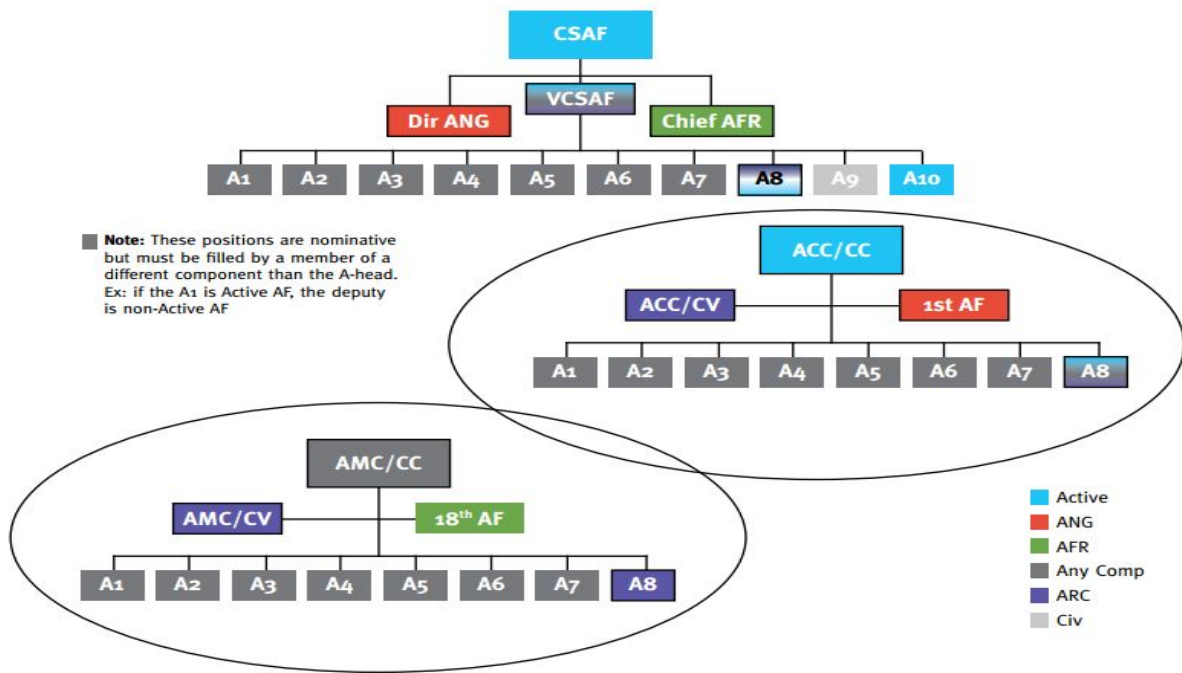


Figure 3. Potential Corporate Level Integration (NCSAF, 2014)

The i-Wing concept has significant potential as the next major organizational structure the Air Force needs to achieve as a service. However, until we can overcome the unity of command issues at the wing level, its successful implementation is unlikely.

On 30 September 2002, the 116th Air Control Wing (Total Force) was activated in conjunction with the inactivation of the 116th Bomb Wing (ANG) and 93rd Air Control Wing (AD) at Robins AFB in Georgia (Doehling, 2005). This realignment was the first attempt at an i-Wing organizational structure. Unfortunately, many of the issues highlighted as lessons learned remain unresolved.

Dual-Status Commanders and Dual-Hatted Commanders

Established in the aftermath of 9/11, the first real test of the Dual-Status Commander (DSC) construct manifested as a lackluster response to Hurricane Katrina. The dysfunctional

relationships and lack of unity of command between Federal and state forces were noticed and documented by the public up through the White House and around the world. “Lack of an integrated command structure for both active duty and National Guard forces exacerbated communications and coordination issues during the initial response” (U.S. Executive Office of the President, 2006).

The NCSAF recommended use of a DSC as an option to solve the unity of command issue plaguing Total Force units. While Dual Status Commanders play a vital role in the defense of the nation, Appendix C: Department of Defense Dual Status Commander of Joint Publication 3-28: Defense Support of Civil Authorities clearly defines the outer boundaries of that role; namely limiting the use of DSCs in response to certain pre-planned emergency scenarios or major disaster on our soil.

“USNORTHCOM and/or USPACOM, in coordination with the NGB, conducts sufficient planning, preparation, and coordination such that appointment and employment of a DSC is an option capable of immediate implementation should the President or SecDef and governor of the affected state(s) so agree. This option should improve unity of effort and ensure a rapid response to save lives, prevent human suffering, and mitigate great property damage for designated planned events, or in response to an emergency or major disaster within the US” (JP 3-28, 2013).

Similarly but with notable differences, dual-hatted commanders are described in AFDD-1 and are extremely limited in use. Examples include the Commander, Air Force Forces (COMAFFOR) dual-hatted as the joint force air component commander (JFACC) or combined air component commander (CFACC) (AFDD-1, 2011). The JFACC may also be referred to as a dual-designated service component commander (JP 3-30, 2014).

Leadership and Command

Leadership is a vital piece to the success of any organization. Arguably even more relevant in the current Total Force construct, where a unit commander may often have competing missions and goals depending on who is asking or tasking. Applicable regardless of component, Air Force Instruction 1-2, Air Force Culture: Commander's Responsibilities charges commanders to establish a healthy command climate and deliberately execute the mission, lead people, manage resources, and improve the unit. A vital part of leading people includes the professional development of subordinates to include broadening opportunities. Critical to the Total Force discussion, this instruction specifically states its application to both Active Duty and Reserve Component commanders. Additionally, leaders at all levels should apply the principles described in the instruction (AFI 1-2, 2014).

Unity of Command, Title 10 and Title 32 Status, Operational Control, Tactical Control, Operational Direction, Administrative Control, and Specified Administrative Control

A central issue surrounding Total Force is unity of command. While much is attributed to different Title status held by commanders and members assigned to Total Force units, the water is muddied further. Joint Publication 3-0, Doctrine for Joint Operations (JP 3-0) states "The principles of war guide warfighting at the strategic, operational, and tactical levels. They are the enduring bedrock of US military doctrine" (2001). These principles include Objective, Offensive, Mass, Economy of Force, Maneuver, Unity of Command, Security, Surprise, and Simplicity.

"The purpose of unity of command is to ensure unity of effort under one responsible commander for every objective. Unity of command means that all forces operate under a single commander with the requisite authority to direct all forces employed in pursuit of a common purpose. Unity of effort, however,

requires coordination and cooperation among all forces toward a commonly recognized objective, although they are not necessarily part of the same command structure. In multinational and interagency operations, unity of command may not be possible, but the requirement for unity of effort becomes paramount. Unity of effort — coordination through cooperation and common interests — is an essential complement to unity of command” (JP 3-0, 2011).

Minimizing confusion, Joint Doctrine establishes clear lines of control at all levels of command. Joint Publication 1: Doctrine for the Armed Forces of the United States defines Operational Control, also known as OPCON, is the “authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission.” Tactical control, or TACON, is also defined as an

“authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed direction and control of movements and maneuvers within the operational area necessary to accomplish assigned missions or tasks assigned by the commander exercising OPCON or TACON of the attached force. TACON is able to be delegated from a lesser authority than OPCON and may be delegated to and exercised by commanders at any echelon at or below the level of CCMD” (JP 1, 2013).

AFI 90-1001 introduces the term Operational Direction, known as OPDIR and goes on to say TFIA commanders at the operational level achieve unity of effort through OPDIR.

“TFIA commander’s or supervisor’s operational authority over forces not administratively assigned to that commander/supervisor. It includes the authority to assign tasks, designate objectives, synchronize and integrate actions, and give authoritative direction necessary to accomplish the mission. OPDIR allows commanders to establish supervisory direction over all personnel assigned or detailed to work within functionally integrated elements. OPDIR is only exercised within a TFIA.”

However, unity of effort is not a principle of war, nor is it what we should strive for when referring to the operation of Total Force units. Focus on unity of command is paramount. Furthermore, this AFI is the only reference to OPDIR in all USAF and Joint publications. Under

the current TFI construct, TACON and OPDIR appear to be synonymous, and the introduction of this term has created confusion at many levels.

Administrative Control (ADCON) and Specified ADCON are two additional areas of friction in the Total Force construct today. This friction is primarily due to the selective nature of dealing with issues. In the Joint community, ADCON is mainly concerned with forces assigned from other Services and is defined as

“the direction or exercise of authority over subordinate or other organizations with respect to administration and support, including organization of Service forces, control of resources and equipment, personnel management, logistics, individual and unit training, readiness, mobilization, demobilization, discipline, and other matters not included in the operational missions of the subordinate or other organizations. ADCON is synonymous with administration and support responsibilities identified in Title 10, USC. This is the authority necessary to fulfill Military Department statutory responsibilities for administration and support. ADCON may be delegated to and exercised by commanders of Service forces assigned to a CCDR at any echelon at or below the level of Service component command. ADCON is subject to the command authority of CCDRs. ADCON may be delegated to and exercised by commanders of Service commands assigned within Service authorities. Service commanders exercising ADCON will not usurp the authorities assigned by a CCDR having COCOM over commanders of assigned Service forces” (JP 1, 2013).

Air Force Doctrine further defines administrative control with the term Specified ADCON, described as a responsibility delegated to the COMAFFOR. These responsibilities include but are not limited to the proper employment of forces; organization, training, equipping, and sustaining forces in-theater; maintaining reach back capabilities; development of program and budget requests; force protection requirements; and maintaining discipline (AFDD-2, 1998).

The current TFI construct gives OPCODE to the Host Wing (the ANG in the case of an active associate unit) but the Parent Wing maintains ADCON. Memorandums of Agreement typically establish this relationship. Due to dual OPCODE and ADCON chains of command,

issues surrounding unity of command well as force development have materialized and must be resolved.

Building Partnerships

As a service, the Air Force defines its responsibilities by the core functions it performs. The newest of these functions is Building Partnerships. When discussed, the immediate focus on building partnerships goes to our foreign interests. However, a vital element of building partnerships focuses on domestic relationships, as outlined in AFDD-1: Air Force Basic Doctrine, Organization, and Command dated 14 Oct 2011.

“Building Partnerships is described as Airmen interacting with international airmen and other relevant actors to develop, guide, and sustain relationships for mutual benefit and security. Building Partnerships is about interacting with others and is, therefore, an inherently inter-personal and cross-cultural undertaking. Through both words and deeds, the majority of interaction is devoted to building trust-based relationships for mutual benefit. It includes both foreign partners as well as domestic partners and emphasizes collaboration with foreign governments, militaries, and populations as well as US government departments, agencies, industry, and NGOs. To better facilitate partnering efforts, Airmen should be competent in the relevant language, region, and culture. The sub-elements of this function are: communicate and shape.”

No organization can afford to understate the value of communication; Total Force units are no exception. In fact, communication is arguably more critical to Total Force units. Attention must be drawn, however, to the shape element of building partnerships. “Shape refers to conducting activities to affect the perceptions, will, behavior, and capabilities of partners, military forces, and relevant populations to further US national security or shared global security interests” (AFDD-1, 2011).

The value and structure of partnerships have become increasingly important to the commercial sector. Numerous models and lessons learned can potentially apply to Total Force units. One highly regarded model of particular interest is the Partnership Model of Lambert,

Emmelhainz, and Gardner. This model was developed by incorporating lessons learned from the best partnering experiences of fifteen member companies of Ohio State University's Global Supply Chain Forum. The model itself consists of four basic steps: an examination of partnership drivers, examination partnership facilitators, component calibration of partnership, and the outcome measurement. Drivers are the persuasive reasons to create a partnership. Facilitators are the characteristics of the potential partnering entities that will either help or hinder the collaboration process. A thorough analysis of the drivers and facilitators determines the appropriate type of partnership. Components are the elements management can control and implement at various points. However, partnership type determines the actual implementation method. Finally, outcomes are the measurements of performance as defined by expectations each partner has achieved (Lambert, Emmelhainz, & Gardner, 1996). Figure 4 illustrates this model.

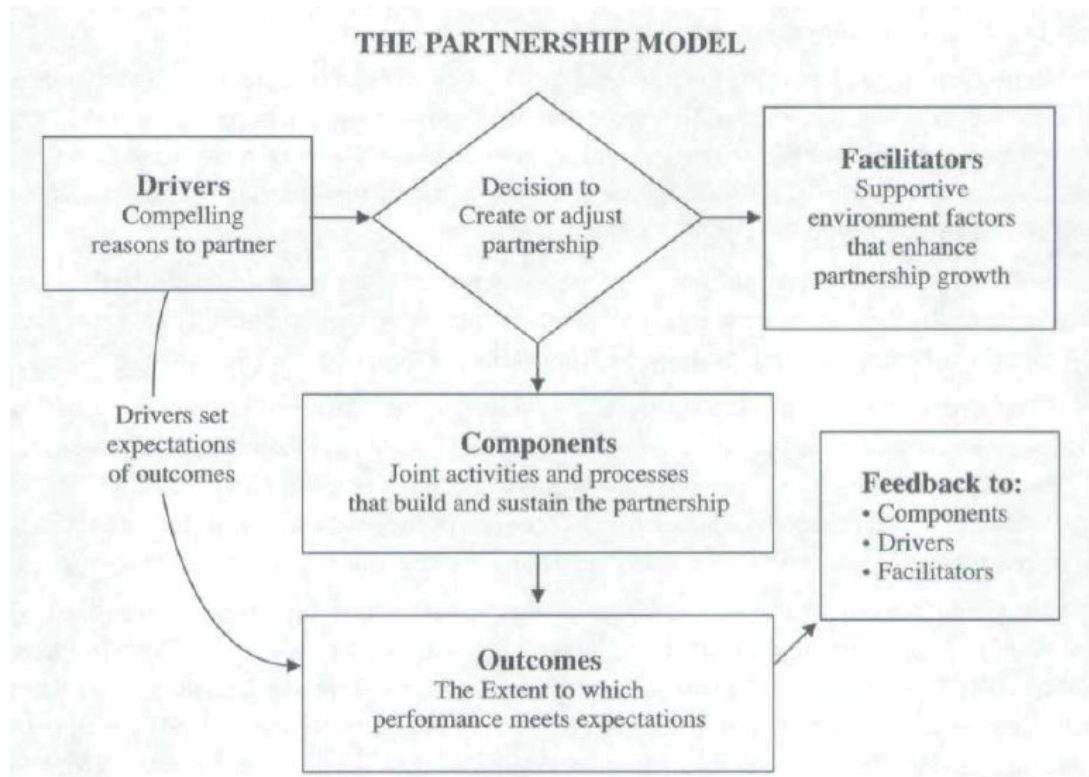



Figure 4. Lambert, Emmelhainz, and Gardner Partnership Model

This proven partnership model not only provides a much-needed structure for measuring performance outcomes, it clearly and expeditiously establishes the mutual understanding and commitment of both partners required for partnership success. Keep in mind one critical factor: partnerships are justified only if they stand to achieve substantially better results together than they could independently. Partnerships require work, may be costly to implement and require a high degree of coordination, communication, and risk. Establishing partnerships, where justified, helps ensure the value delivered from the union. However, partnerships can still fail if the partners have asymmetric expectations (Lambert & Knemeyer, 2004).

Culture Clash

The activation of the 116th Air Control Wing at Robbins AFB was the first real attempt at total integration between components. The lessons learned provided by Colonel Bob

Doehling, 116th Air Control Wing Vice Air Commander, highlight numerous issues still inadequately addressed nearly a decade later. Figure 4 below lays out a side-by-side comparison of the two cultures. While not all-inclusive, the comparison paints a picture of several significant cultural differences that add to the challenge of commanding a Total Force unit, particularly an active association.



CULTURE COMPARISONS	
<ul style="list-style-type: none"> ■ AD culture ■ More formal unit atmosphere ■ Significant number of disciplinary actions ■ Large group of under age personnel ■ Dormitory living for single junior enlisted ■ No UMD slot required for promotion ■ Frequent PCS enhances career ■ EPR's responsibility growth IAW rank ■ Primary worker is SSGT or below ■ TSGTs are supervisors not workers ■ SMSGTs are not assigned at shop level ■ Nightshift supervised by junior ranks ■ Officers are primary supervisors ■ Rank overages do not affect promotions ■ Excess personnel do not affect promotions ■ Active rank ratio is lower than ANG ■ Separation from AF normally slow 	<ul style="list-style-type: none"> ■ ANG culture ■ More casual unit atmosphere ■ Few disciplinary actions ■ Rarely have under age personnel ■ No one has to live in government quarters ■ Must hold UMD position to promote ■ No PCS likely during career ■ EPR's emphasize potential for growth ■ WG/WL employees are primary workers ■ WG/WL worker frequently is a MSGT ■ SMSGT assigned at shop level ■ Nightshift supervision same as day ■ Enlisted are primary supervisors ■ Rank overages not authorized ■ Excess personnel affect promotions ■ ANG rank ratio is higher than AD ■ Separation from ANG very quick

Figure 5. Total Force Culture Comparison

Program Planning and the Delphi Technique

One of the most effective ways to improve a process or organization is to get inputs from the people most closely associated or highly invested in them. While the information gathered may prove invaluable, the task of capturing those inputs may turn out to be very daunting. “Program planning is the process underlying the development or modification of programs,” with program defined as “a prearranged set of activities which specify the means to achieve a goal” (Delbecq, Van de Ven, & Gustafson, 1975). Many factors lead to complexity in program

planning, and TFI planning is no stranger to these factors as outlined by Delbecq, Van de Ven, and Gustafson (1975):

1. “There is low organizational readiness to adopt the new program due to:
 - a. Limited awareness of the importance of client problems which the program proposal addresses.
 - b. Limited understanding of available solutions due to either lack of modeling by earlier organizations who have adopted similar programs or lack of codified and agreed-upon scientific or technical models and lack of experimental evidence.
2. A large number of individuals or groups constitute the decision set which will have to approve the program and which will review the proposal under conditions where:
 - a. The groups have different value and conceptual orientations.
 - b. Prior communication networks based on joint participation in the development of earlier successful programs do not exist.
3. The proposed program will have a great impact on present organizational arrangements and allocation of resources due to:
 - a. Limited slack resources.
 - b. The absence of major outside funding.”

Nominal Group Technique (NGT) and the Delphi Technique are two special purpose techniques used outside of routine meetings. Both are used where neither negotiation nor bargaining is the objective, but where both judgmental and creative decision-making are essential to arriving at a satisfactory course of action.

“Three measures have generally been used to compare the relative effectiveness of nominal versus interacting group processes: (1) the average number of unique ideas; (2) the average total number of ideas; and (3) the quality of ideas produced. In terms of these three measures of performance, nominal groups have been found to be significantly superior to interacting groups in generating information relevant to a problem” (Delbecq, Van de Ven, & Gustafson, 1975).

There are several differences between NGT and the Delphi Technique. However one of the most significant is the complete absence of social-emotional behavior in the latter, thereby focusing all attention on task-instrumental activities. NGT provides a balance between task accomplishment and maintaining social interaction, which is favorable to many. Another difference between the two is the number of participants. NGT recommends limiting group size to nine members. Conversely, the number of Delphi participants is unlimited and “is frequently used as a technique to survey one or more target groups” (Delbecq, Van de Ven, & Gustafson, 1975). Finally, the Delphi Technique allows for anonymity. It can also “be used to aggregate judgments where people are hostile toward one another, or where individual personality styles would be distracting in a face-to-face setting” (Delbecq, Van de Ven, & Gustafson, 1975).

In order to optimize success, a Delphi study should only be conducted when the following conditions can be met: (1) “Adequate time; (2) Participant skill in written communication; and (3) High participant motivation” (Delbecq, Van de Ven, & Gustafson, 1975). Furthermore, “it is unrealistic to expect effective participation unless respondents: (1) feel personally involved in the problem of concern to the decision makers; and (2) have pertinent information to share” (Delbecq, Van de Ven, & Gustafson, 1975)

The Delphi format typically followed focuses on three rounds of questionnaires to generate consensus on issues of importance. The first round asks only one or two open-ended questions regarding an issue. The second questionnaire provides clarifications, support or criticisms made, and hopefully a preliminary indication of priorities. The third questionnaire allows respondents to review and reflect on their previous responses while judging the importance of each item through rankings. Findings are then delivered to the decision makers. However, this is not the only format for Delphi surveys. “Delphi is a decision-making tool and

should be modified to respond to the needs of the individual decision makers (Delbecq, Van de Ven, & Gustafson, 1975).

Using the Delphi Technique as the primary method of collecting data has its limitations, as does any data collection tool. In his book “Improving Survey Questions: Design and Evaluation,” Fowler highlights the importance of clearly communicating to respondents. “To the extent that researchers can minimize differences in interpretation of what questions mean, they can increase the validity of measurement. The goal is to have differences in answers reflect differences in where people stand on the issues, rather than differences in their interpretations of the questions” (Fowler, 1995). To accomplish this, two suggestions are offered. “First, the words in the questions should be as well defined as possible to increase the consistency of respondent understanding of the ideas. Second, items should be carefully studied to make sure that only a single idea or question is being presented” (Fowler, 1995). Additionally, numerous studies have demonstrated the impact of question placement in a survey instrument. Preceding questions affect responses, not to mention the effect that fatigue may have on responses near the end of a questionnaire as opposed to the beginning (Fowler, 1995).

The biggest takeaway Fowler offers focuses on the strength of survey research. This strength is found by “asking people about their first-hand experiences: what they have done, their current situations, their feelings and perceptions” (Fowler, 1995). He cautions researchers to beware of secondhand information, hypothetical questions, as well as asking about causality or solutions for complex problems.

III. Methodology

“A good decision is based on knowledge, not on numbers.” – Plato

Chapter Overview

The primary methodology used for this research was the Delphi Technique, due to the vast objectives it can effectively achieve. Its core objective “is to obtain the most reliable consensus of opinion of a group of experts. It attempts to achieve this by a series of intensive questionnaires interspersed with controlled opinion feedback” (Dalkey & Helmer, 1962). Additionally it can be used to “achieve the following objectives:

1. Determine or develop a range of possible program alternatives;
2. Explore or expose underlying assumptions or information leading to different judgments;
3. Seek out information that may generate a consensus on the part of the respondent group;
4. Correlate informed judgments on a topic spanning a wide range of disciplines, and;
5. Educate the respondent group as to the diverse and interrelated aspects of the topic” (Delbecq, Van de Ven, & Gustafson, 1975)

While Delphi studies may vary significantly in terms of format design and implementation, they are a successful alternative to the decision-making process when using dispersed respondents. Characteristics facilitating this performance include:

1. “Isolated generation of ideas in writing produces a high quantity of ideas;
2. Process of writing responses to questions forces respondents to think through the complexity of the problem and to submit specific, high-quality ideas;
3. Search behavior is proactive since respondents cannot reach the ideas of others;
4. Anonymity and isolation of respondents provide freedom from conformity pressures;

5. Simple pooling of independent ideas and judgments facilitates equality of participants;
6. Delphi process tends to conclude with a moderate perceived sense of closure and accomplishment; and
7. The technique is valuable for obtaining judgments from experts geographically isolated” (Delbecq, Van de Ven, & Gustafson, 1975).

Questionnaire Development

The first questionnaire consisted of 78 questions (fourteen of which were demographic in nature) and took between 45 minutes to 2 hours to complete (see Appendix A for complete survey). The majority of questions asked for a Level of Agreement Likert-scale (see Appendix D for Likert-Type Scale Response Anchors) rating from 1 to 7, with one as Strongly Disagree and seven as Strongly Agree. Panel members were asked to elaborate on why they answered as they did. A Likert scale to measure the responses of the Delphi survey was deliberately used, as they “are commonly used to measure attitude” (Jamieson, 2004). The danger with using a Likert scale for data collection is choosing inappropriate statistics for the actual analysis.

Questionnaire One closed with a basic statistical analysis of the responses. The panel member responses were analyzed first as a whole, focusing on mean, variance, and standard deviation. To complete this analysis, results were further broken down by component, level of the position held as a commander, and weapon system. These sub-groups means were compared to the sample mean, then analyzed by way of a T-test to determine statistical relevance. Those questions found to be of significance are discussed in detail in Chapter 4; Appendix B contains the complete data set and subsequent analysis for Questionnaire One.

The second questionnaire expounded on Questionnaire One, incorporating changes by AMC as well as the inputs provided by the thirty-eight panel members. The questionnaire was distributed on March 1, 2015 via email with a link to SurveyMonkey with a ten-day suspense

date. The second questionnaire consisted of 33 questions (four of which were demographic in nature) and took between 15 and 30 minutes to complete (see Appendix C for complete survey). This questionnaire focused on solutions to the issues raised in Questionnaire One. Panel members were asked whether or not they agreed with a given scenario or question. They were also requested to elaborate on any matter with which they disagreed. The level of agreement provided the basis for recommendations at the conclusion of the research.

Questionnaire Panel

The targeted Questionnaire Panel consisted of Current and Previous Squadron, Group, and Wing Commanders of TFI organizations, to include Host and Parent Organizations Commanders. While the questionnaire was anonymous, see the Acknowledgements on Page vi for a list of those participants who opted to share their identity.

Questionnaire Distribution

The initial questionnaire was disseminated on November 9, 2014 via email with a link to SurveyMonkey with a two-week suspense date. Active Duty and Air National Guard commander responses were solicited by the AMC Deputy A3 and ANG Deputy A3, respectively. The researcher petitioned members of Air Force Reserve Command, as the AFRC Deputy A3 was unavailable. The researcher also sought responses across the components to those commanders personally known. The initial response rate on the questionnaire was extremely low and predominantly consisted of Active Duty members. Therefore, participation with the questionnaire was re-solicited with an additional two weeks for completion. The eventual number of responses (thirty-eight) allowed the questionnaire to be statistically relevant during analysis.

For the first round, sixty questionnaires were distributed to Active Duty commanders with twenty-two responses. Of twenty-seven questionnaires distributed to Air National Guard commanders, eight responses were received. Finally, of thirty-four questionnaires distributed to Air Force Reserve Command commanders, an additional eight responses were collected. Respondents included eight Wing Commanders, nine Group Commanders, and twenty-one Squadron Commanders.

For the second round, twenty-eight questionnaires were distributed to Active Duty commanders with sixteen responses. Of fifteen questionnaires distributed to Air National Guard commanders, only two responses were received. Six of fourteen questionnaires distributed to Air Force Reserve Command commanders were completed. Respondents included two Wing Commanders, four Group Commanders, and eighteen Squadron Commanders.

Research Wrench

At some point in the development, distribution, and analysis of the first questionnaire (approximately October – November 2014), Air Mobility Command made revisions to its objectives for TFI units and subsequent measures of merit. Shown in Table 1 is a side-by-side comparison of these changes. AMC metrics no longer include items highlighted in red, while modified items in yellow, and items in green are new.

Table 1. AMC's TFI Objectives & Measures of Merit (Original & Revised)

AMC's Objectives & Measures of Merit at Start of Research	AMC's Updated Objectives & Measures of Merit
Objective 1: Access to Iron (Active Duty flying ARC aircraft for training and deployments)	Objective 1: Access to Combat Capabilities (Ensure that active associate squadrons are improving the combat effectiveness of the mobility enterprise by providing commensurate aircraft and personnel for MAF operations as their counterparts in other active duty units.)
MoM 1.1: Mission Capable Rates	MoM 1.1: Aircraft Availability to CAAP
MoM 1.2: ARC Utilization Rates	MoM 1.2: Aircrew/Mx UTCs Available for MAF Operations
Objective 2: Increase Availability to Support Combat and Training Requirements (additional ARC aircraft are made available to support deployed and training missions. Dwell to deploy rates at active associate units should be on par with their counterparts at non-active associate units.)	MoM 1.3: Associate Unit members on Individual Deployments
MoM 2.1: Maintain Parity for AD Deploy-to-Dwell Rates and Mx Deploy to Dwell Rates	Objective 2: Balance Aircrew/Mx Experience Levels Across the Total Force (Individuals assigned to active associate squadrons will gain experience and upgrade at the same rate or better than their counterparts in a straight active duty flying organization.)
MoM 2.2: ARC Volunteerism	MoM 2.1: Inexperienced Aging Rates for Ops
MoM 2.3: Daily ARC Aircraft Deployed to Combatant Command	MoM 2.2: Inexperienced Aging Rates for Mx
MoM 2.4: Operations/Mx Temporary Duty (Avg Days/Year)	MoM 2.3: Associate Flying Hour Burn Down
Objective 3: Balance Aircrew Maintenance (Mx) Experience Level Across the Total Force (Individuals assigned to active associate squadrons should gain experience and upgrade at the same rate or better than their counterparts in a regular active duty flying organization.)	Objective 3: Increase Availability to Support Combat & Training requirements (Additional ARC aircraft are made available to support deployed and training missions. Dwell to deploy rates at active associate units are on par with their counterparts at non-active associate units.)
MoM 3.1: Inexperienced Aging Rates for Ops	MoM 3.1: Maintain parity for AD Deploy-to-Dwell Rates
MoM 3.2: Inexperienced Aging Rates for Mx	MoM 3.2: Daily Avg ARC A/C Deployed to GCC
Objective 4: Preserve Professional Development (Being assigned to a TFI unit should afford Airmen equal opportunities to meet their professional development gates as well as or better than their counterparts at non-active associations.)	MoM 3.3: Ops/Mx TDY (Avg Days/Yr)
MoM 4.1: Advanced Academic Degree Completion	Objective 4: Preserve Professional Development (Being assigned to a TFI unit affords Airmen equal opportunities to meet their professional development gates as well or better than their counterparts at non-active associations.)
MoM 4.2: Professional Military Education Completion	MoM 4.1: AAD Completion
MoM 4.3: Retention Rates	MoM 4.2: PME Completion
MoM 4.4: Enlisted Promotion Rates	MoM 4.3: Enlisted Retention Rates
	MoM 4.4: Enlisted Promotion Rates

Following the conclusion of the second questionnaire in March 2015, AMC once again amended some of its measures of merit. In accordance with Chief of Staff of the Air Force General Welsh's guidance from 15 June 2014, AMC is no longer tracking Advanced Academic Degree (AAD) or Professional Military Education (PME) completion rates as part of the Preserve Professional Development Objective.

Summary

A two questionnaire Delphi study was conducted to answer the investigative questions of this research. Panel members consisted of former and sitting TFI squadron, group, and wing commanders from all three Air Force components. As evidenced by two changes to objectives by AMC during the duration of this study, it is imperative that objectives and measure of merit to remain relevant. These changes were long overdue, and this process must continue through relevant feedback from those most experienced in the opportunities and challenges presented by Total Force organizations.

IV. Analysis and Results

*“Not everything that counts can be counted,
and not everything that can be counted counts.” - Albert Einstein.*

Chapter Overview

The purpose of this research was to determine whether the current objectives and measures of merit are adequate, identify any concerns with unity of command issues between Title 10 and Title 32 authorities, and determine if sufficient emphasis is being placed on force development in TFI units.

The Air Force’s stated objectives for Total Force Integration (along with the minimum measures of merit required to be reported) are outlined in AFI 90-1001 and its respective guidance memorandum. To begin with AFI 90-1001 AFGM 2014-01 states,

"Associations provide surge and rotational capacity of combat power, enhanced training, and more efficient operations. Components will associate to improve productivity, increase or retain mission capabilities, and/or to achieve synergy in the use of Total Force equipment, manpower, and infrastructure."

AFI 90-1001 paragraph 1.3 discusses the objective of the Total Force Integration program,

"is to meet Air Force operational mission requirements by aligning equipment, missions, infrastructure, and manpower resources within the Air Force to enable a more effective and efficient use of these assets. The key requirement is to ensure that the Air Force maintains the capability to meet combatant commander (CCDR) requirements for both surge and sustained operations."

AFI 90-1001 paragraph 1.5 reiterates the objective of integration as meeting both combatant commander (CCDR) surge and steady state requirements. Finally, AFI 90-1001 paragraph 3.5.2 addresses TFI measure of merit reporting. It specifically emphasizes the minimum required metrics reported to the parent MAJCOM must include crew ratio, dwell times, absorption rates,

utilization (UTE) rates, OPSTEMPO (Operations Tempo), and PERSTEMPO (Personnel Tempo).

Based on this guidance, the first Delphi questionnaire was developed. From the responses collected, the second Delphi questionnaire was developed. The results and analysis of over 400 pages of data are summarized below and in supporting appendices.

Questionnaire One

The research conducted in Questionnaire One showed a broad interpretation or understanding of what AMC's objectives and metrics are trying to measure by those who should be most familiar with them. It also highlighted a major hurdle to Total Force effectiveness: unity of command barriers.

While a basic statistical analysis of the responses from Questionnaire One provided some insight, the commentary following each question provided the most valuable information. Analysis performed on the panel member responses first focused on mean, variance, and standard deviation. Results were then broken down by component, position held while in command, and major weapon system, to complete the analysis. Comparison between these sub-group means and the sample mean highlighted question outliers. Finally, a T-test determined statistical relevance on each issue. In total, fifty questions were statistically analyzed (See Appendix B for a summary of analysis). Of the fifty, only three questions (54, 55, and 75) within the various sub-groups fell outside of one standard deviation from the mean. Each of these proved statistically significant (at 90% or greater), as well as ten other subgroup means of various questions. Questions 54 and 55 both address professional development issues, and question 75 addressed unity of command issues. The second Delphi questionnaire explored each issue in greater detail. The additional ten statistically significant sub-group questions were 17,

24, 25, 26, 35, 42, 43, 46, 48, and 62. Appendix A houses the complete survey for reference of specific questions. These questions fell into two basic categories. The first group involved metrics AMC is no longer measuring, such as ARC volunteerism, advanced academic degree completion, and professional military education completion. The other group included indirect issues that either proved to be outside the scope of this research or provided supplemental information to the issues addressed in the second Delphi questionnaire.

Aligning Strategic and Tactical Objectives

A short discussion is warranted before diving in the results of Questionnaire Two. Strategically, there is no doubt as to the importance of Total Force integration. This importance is evident in the governing AFIs. To begin this dialogue, a quick review of the regulation. AFI 90-1001 AFGM 2014-01 states,

"Associations provide surge and rotational capacity of combat power, enhanced training, and more efficient operations. Components will associate to improve productivity, increase or retain mission capabilities, and/or to achieve synergy in the use of Total Force equipment, manpower, and infrastructure."

This guidance merits further explanation. "Associations provide surge and rotational capacity." By definition, the ARC exists to provide that capability if used as intended. Unfortunately, as an institution we have failed to hit the reset button on our "Strategic Reserve" force after its mobilization for Desert Shield/Storm. The roles and missions of the Air Force components need to be redefined if the days of a strategic reserve truly are a thing of the past. This precise issue, raised by the National Commission on the Structure of the Air Force, is a top priority for Air Force Secretary Deborah Lee James and is a discussion focal point in the Total Force Continuum office.

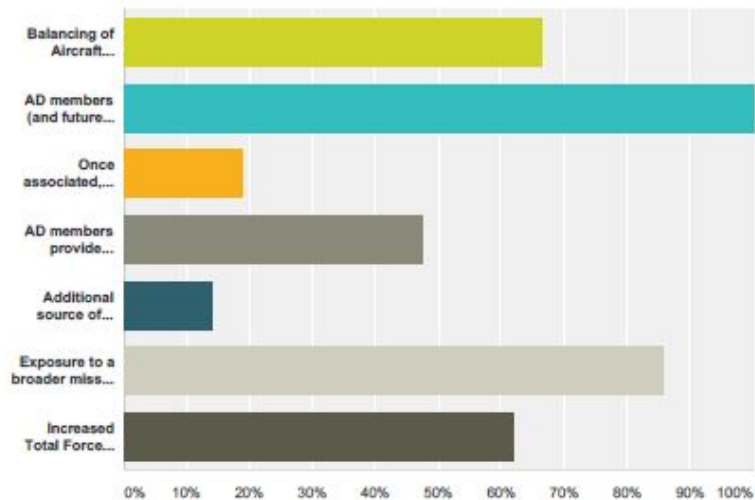
Continuing, “Components will associate to improve productivity, increase or retain mission capabilities.” Improving productivity includes absorption rates, seasoning times, and things of that nature. Increasing or retaining capabilities includes the preservation of capacity, which is a perfect union with the reserve components from an efficiency standpoint. “The reserve component of the Department of Defense represents about 39% of the personnel, but only 9% of the budget” (Gjertsen, 2015). This statistic carries a significant caveat, as it is true only until ANG mobilization in Title 10 status. ANG costs during this time are nearly equal to that of the RegAF. However, Title 10 mobilization is generally short-term with cost savings again realized immediately upon demobilization.

Finally, “achieve synergy in the use of Total Force equipment, manpower, and infrastructure.” Presumably, this sharing of resources is where the Air Force realizes the most benefit from ANG associations. Unfortunately, there is little publicly available information from which to make a concrete assessment.

Strategically, the concept of Total Force Integration sounds like the ideal business model, something the Air Force should have done from day one. However, the value of TFI is fundamentally different at the tactical level. To better understand and articulate the value of integration, research panel members evaluated seven potential benefits of Total Force units and asked add any benefits they found; Figure 6 depicts these responses.

Q20 Members from every component have questioned the value/benefit of Total Force units. Please select all you believe to be actual or potential benefits of TF units and include any other benefits you have observed.

Answered: 21 Skipped: 4



Answer Choices	Responses
Balancing of Aircraft Utilization (extending life cycle of AD assigned aircraft, minimizing underutilization of ARC assigned aircraft)	66.67% 14
AD members (and future leaders) gain a better understanding of the strengths of the ARC and their contribution to national defense	100.00% 21
Once associated, increased protection from mission changes to ARC units	19.05% 4
AD members provide additional daily manpower to ARC units	47.62% 10
Additional source of funding for ARC units when AD assigned	14.29% 3
Exposure to a broader mission set and enhanced training/experience for AD members	85.71% 18
Increased Total Force retention rates	61.90% 13
Total Respondents: 21	

Figure 6. Questionnaire Two Question Twenty

Associations between components have numerous benefits though many are difficult to measure. While there is no way to measure it, 100% of surveyed commanders agreed. AD members (and future leaders) gain a better understanding of the strengths of the ARC and their contribution to the defense of our nation. This finding is a primary example of not only the importance of Total Force partnerships, but also the professional development that AMC needs

to include in its metrics. In reality, that particular benefit goes both ways as summarized by Brigadier General Stephen Rader, Commander, 153 Airlift Wing, Wyoming ANG,

“Both sides get a better understanding of the difference and similarities each component brings. Friendships are formed. Better appreciation and understanding is a key element in being a better commander in the future (for any unit). Both sides improve when put together as they tend to strive toward the best in each culture. This results in a hybrid unit that is better than either would be separately.”

For any association to be successful, it is crucial to establish effective communication and set agreed upon expectations. Col Keith Jones, former deputy operations group commander for the 116th Air Control Wing, explicitly identified expectation management as one of the primary challenges with the i-Wing blending experiment (Dailey, 2008). Along with effective communication and clear expectations, it is also essential for each partner to find value in the union through shared or similar priorities, goals, and interests.

Research Questionnaire One raised just as many issues and questions as it attempted to answer. Of primary concern were those concepts mentioned by both General Radar and Colonel Jones, along with many others. Is there effective communication and are expectations clearly understood? Are Active Duty and ARC fundamental priorities aligned? It was obvious from numerous comments that AMC's objectives were unclear at the unit level. Keep in mind the individuals who needed the greatest level of understanding to effectively lead their units made these comments. It was also very clear that those same objectives were often one-sided as to what AMC expected from these associations but not what the ARC hoped to gain from them. A perfect example of this was the ARC Volunteerism metric. Differences such as this will continue to make Total Force integration difficult.

The one relevant question that remains is whether the Air Force can align the strategic and tactical objectives of TFI and if so, how. Failure to align may result in the demise of TFI. One simple solution may be to restructure Total Force units from associations to partnerships. Successful business associations are classified in this very manner. Currently all AD/ANG/AFRC marriages are lumped together under one umbrella called associations; however, these associations are ill-defined and fall across a broad spectrum. Some units only share aircraft and a runway, others are loosely associated, however, none are truly integrated. A more appropriate description of the Total Force integration initiative may start with a mere change of name: Total Force Partnerships. Webster defines a partnership as “an alliance or association of persons for the prosecution of an undertaking.” On the other hand, an association is described as “a social or business relationship; a relation resulting from interaction or dependence.” Finally, delineate integration as “having different groups treated together as equals in one group.” A simple shift in thinking accomplishes two things. **First, renaming associations to partnerships helps stimulate the cultural mindset adjustment needed for full Total Force Integration. Second, the shift aims to refocus on a vital Air Force core function of Building Partnerships, which applies to both foreign and domestic partners.**

Much like the spectrum of conflict, Total Force partnerships bridge a vast continuum. A new approach to integration may be to look at these partnerships from a spectrum perspective. At the far left of the spectrum are co-located partnerships (this is seen in many Classic Associations, such as McChord). Somewhere in the middle are what are currently known as associated partnerships (30 AS at 153 AW in Cheyenne, WY is a good example). On the far right is the ultimate end-state Total Force partnerships are striving for, 100% integration of an Active Duty unit into a Guard Wing. This fully integrated partnership would focus on deployable, fully

mission capable assets. It would absorb the AD UTCs as well as all training goals/requirements, and complete ADCON and OPCON responsibilities would fall with the Host Wing Commander.

Figure 7 illustrates this idea for clarity.

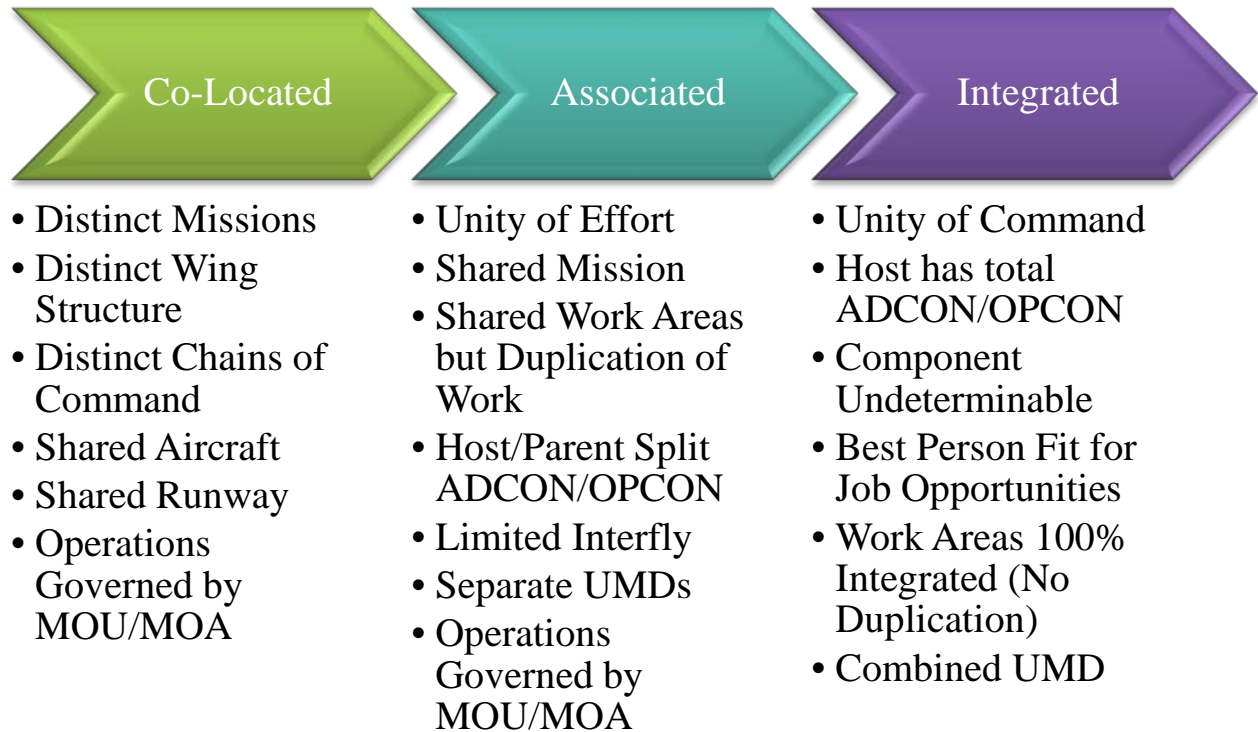


Figure 7. Proposed Spectrum of Total Force Partnerships

To clearly determine whether a partnership is effective, the objectives specific to each type of partnership must be defined. If the goal is to balance experience across the force, that may only require a certain level of integration. If the purpose is to expose AD personnel to the ARC, in order to grow future leaders with a deeper understanding of what the Guard and Reserve Forces can bring to the fight, then a deeper level of integration is probably needed. The bottom line is that the Air Force cannot measure the effectiveness of these partnerships, unless it clearly defines the objectives of each type of partnership. Dissimilar objectives dictate unique metrics to

measure effectiveness. Standardized metrics do not fit every partnership. **Adopting a varying approach to objectives and subsequent measures of merit will help propel AMC towards optimizing the potential of its Total Force Enterprise.**

Questionnaire Two

Given the information just provided, Questionnaire Two focused on finding solutions to the issues cultivated from Questionnaire One.

Objectives and Metrics

From the concept of a spectrum of association partnerships as described above, in conjunction with feedback from AD, ANG and AFRC graduated TF commanders, the proposed changes to AMC's objectives and measures of merit as outlined below in Tables 2 through 5 were supported as follows:

60% of panel members supported Objective 1 changes.

Table 2. Proposed Objective 1 and Measures of Merit Across the Spectrum of Total Force Partnerships

Co-Located Partnerships	Associated Partnerships	Integrated Partnerships
Objective 1: Shared Utilization of Aircraft (AD flying ARC aircraft in order to accomplish the full spectrum of national missions and objectives as well as training, meanwhile extending the life of AD assigned aircraft and minimizing underutilization of ARC assigned aircraft)	Objective 1: Shared Utilization of Aircraft (AD flying ARC aircraft in order to accomplish the full spectrum of national missions and objectives as well as training, meanwhile extending the life of AD assigned aircraft and minimizing underutilization of ARC assigned aircraft)	Objective 1: Shared Utilization of Aircraft (AD flying ARC aircraft in order to accomplish the full spectrum of national missions and objectives as well as training, meanwhile extending the life of AD assigned aircraft and minimizing underutilization of ARC assigned aircraft)
MoM 1.1: Aircraft Availability to COMAFFOR Apportionment and Allocation Process (CAAP)	MoM 1.1: Aircraft Availability to COMAFFOR Apportionment and Allocation Process (CAAP)	MoM 1.1: Aircraft Availability to COMAFFOR Apportionment and Allocation Process (CAAP)
MoM 1.1.1: Mission Capable Rates	MoM 1.1.1: Mission Capable Rates	MoM 1.1.1: Mission Capable Rates
MoM 1.1.2: Total Not Mission Capable for Maintenance	MoM 1.1.2: Total Not Mission Capable for Maintenance	MoM 1.1.2: Total Not Mission Capable for Maintenance
MoM: 1.1.3: Total Not Mission Capable for Supply	MoM: 1.1.3: Total Not Mission Capable for Supply	MoM: 1.1.3: Total Not Mission Capable for Supply
MoM 1.2: Acft Utilization Rates (should be higher than non-associated units)	MoM 1.2: Acft Utilization Rates (should be higher than non-associated units)	MoM 1.2: Acft Utilization Rates (should be higher than non-associated units)
MoM 1.2.1: Acft Utilization Rate by AD (component utilization should be comparable or lower than non-associated AD units)	MoM 1.2.1: Acft Utilization Rate by AD (component utilization should be comparable or lower than non-associated AD units)	
MoM 1.2.2: Acft Utilization Rate by ARC (component utilization should be comparable to non-associated ARC units)	MoM 1.2.2: Acft Utilization Rate by ARC (component utilization should be comparable to non-associated ARC units)	
MoM 1.3: Mission Effectiveness Rate (comparable to non-associated unit)	MoM 1.3: Mission Effectiveness Rate (comparable or slightly higher than non-associated units if taking advantage of ARC experience)	MoM 1.3: Mission Effectiveness Rate (should be higher than non-associated units if taking advantage of ARC experience)

75% of panel members supported Objective 2 changes.

Table 3. Proposed Objective 2 and Measures of Merit Across the Spectrum of Total Force Partnerships

Co-Located Partnerships	Associated Partnerships	Integrated Partnerships
	Objective 2: Increase Personnel Availability to Support Combat & Training requirements	Objective 2: Increase Personnel Availability in order to accomplish the full spectrum of national missions and objectives as well as training
	MoM 2.1: Maintain Combat / Mission Ready Status for Ops and Deployment Ready Status for Mx (as measured by Unit Readiness via ARTS/SORTS)	MoM 2.1: Maintain Combat / Mission Ready Status for Ops and Deployment Ready Status for Mx (as measured by Unit Readiness via ARTS/SORTS)
	MoM 2.2: Maintain parity for AD Deploy-to-Dwell Rates (associated AD members would be tasked to deploy independently from Host Wing)	MoM 2.3: Sustain Desired Dwell Time (airframe dependent, preferably lower than AD, but slightly above traditional ARC units)
	MoM 2.3: Associate Unit members on Individual Deployments	

70% of panel members supported Objective 3 changes.

Table 4. Proposed Objective 3 and Measures of Merit Across the Spectrum of Total Force Partnerships

Co-Located Partnerships	Associated Partnerships	Integrated Partnerships
	Objective 3: Balance Experience Levels Across the Total Force	Objective 3: Balance Experience Levels Across the Total Force
	MoM 3.1: Seasoning Rates for Ops (should be on par or take less time than non-associated units)	MoM 3.1: Seasoning Rates for Ops (should be on par or take less time than non-associated units)
	MoM 3.1.1: Target Rate for CP to AC Upgrade (should be on par or take less time than non-associated units)	MoM 3.1.1: Target Rate for CP to AC Upgrade (should take less time than non-associated units)
	MoM 3.1.2: Target Rate for AC/FE/LM/BO to Instructor	MoM 3.1.2: Target Rate for AC/FE/LM/BO to Instructor
	MoM 3.2: Seasoning Rates for Mx (should be on par or take less time than non-associated units)	MoM 3.2: Seasoning Rates for Mx (should take less time than non-associated units)
	MoM 3.2.1: Target Rate for 3 to 5 Level Upgrade (should be on par or take less time than non-associated units)	MoM 3.2.1: Target Rate for 3 to 5 Level Upgrade (should take less time than non-associated units)
	MoM 3.2.2: Target Rate for 5 to 7 Level Upgrade (should be on par or take less time than non-associated units)	MoM 3.2.2: Target Rate for 5 to 7 Level Upgrade (should take less time than non-associated units)
	MoM 3.3: Monitor Associate Flying Hour Burn Down (use in-conjunction with Seasoning Rates and MC rates)	

65% of panel members supported Objective 4 changes.

Table 5. Proposed Objective 4 and Measures of Merit Across the Spectrum of Total Force Partnerships

Co-Located Partnerships	Associated Partnerships	Integrated Partnerships
	Objective 4: Enhance Professional Development	Objective 4: Enhance Professional Development
	MoM 4.1: Total Force Retention Rates (track transition to ARC compared to non-associated units)	MoM 4.1: Total Force Retention Rates (track transition to ARC compared to non-associated units)
		MoM 4.2: Senior Enlisted Promotion Rates (maintain parity with mbrs of non-associated units)
		MoM 4.3: Enlisted Selected for Special Duty Assignments (maintain parity with mbrs of non-associated units)
		MoM 4.5: IDE Officer Selection (maintain parity with mbrs of non-associated units)
		MoM 4.5: Officer Career Development Above Sq Level (best fit regardless of component, dual fill if best meets unit/msn needs)

Based on the comments provided, this new tiered approach to Total Force objectives was widely supported. This outcome is not surprising as it closely mirrors the Partnership Model developed by Lambert, Emmelhainz, and Gardner and implemented by many successful commercial entities. However, the specific measures of merit discussed may need additional tweaking. Due to the significantly reduced involvement of ARC panel members throughout the Delphi Study, further changes to the measures of merit were not re-addressed. It is imperative all components be agreeable to these objectives if they are to be of any true value.

While balancing the force experience in maintenance is a primary objective, it is imperative to remember a vast majority of the ANG experience lies with the Drill Status Guardsmen. Therefore, the right balance of skill levels is needed to prevent crippling both the

base operating support and maintenance operations while still garnering the knowledge and experience the ANG force has to offer. Panel members were also asked about UMD changes to support the addition of 12 flight crews and four aircraft. Support indicated for the proposed standard UMD is as depicted below:

1. Operations Squadron Commander, Director of Operations, First Sergeant (8F000), Chief Enlisted Advisor (Squadron Superintendent);
 - a. 86% of panel members agree with the necessity of these personnel.
 - b. No specific comment of disagreement
2. Financial Management/Comptroller Journeyman (6F051), Personnel Journeyman (3S051), Knowledge Operations Management Journeyman (3D051);
 - a. 100% of panel members agree with the necessity of these personnel.
3. Airfield Management Craftsman (1C771), Airfield Management Journeyman (1C751); Command Post Craftsman x2 (1C371), Command Post Journeyman x3 (1C351), Aviation Resource Management Craftsman (1C072), Aviation Resource Management Journeyman x2 (1C052), Aviation Resource Management Apprentice (1C032), Intelligence x2 (14N3), Operations Intel Journeyman x2 (1N051), Education & Training Journeyman (3S251), Parachutist/Survival/Evasion/Resistance Journeyman (J1T051), Aircrew Flight Equipment Craftsman (1P071), Aircrew Flight Equipment Journeyman x3 (1P051), Aircrew Flight Equipment Apprentice x2 (1P031), Cyber Systems Operations Journeyman (3D052);
 - a. 61% of panel members agreed on the necessity of these personnel.
 - b. Comments of disagreement centered on not needing Command Post personnel and needing additional Cyber System Operations personnel than proposed.
4. Logistics Plans Journeyman x2 (2G051), Fuels Journeyman x2 (2F051), Materiel Management Journeyman (2S051), Air Transportation Journeyman x2 (2T251);
 - a. 72% of panel members agreed on the necessity of these personnel.
 - b. Comments of disagreement centered on not needing a Fuels Journeyman and that 2T2 personnel are airframe specific.
5. Flight Safety Officer, Weapons Officer x2, Standardization/Evaluation (1 per crew position);

- a. 79% of panel members agreed on the necessity of these personnel.
 - b. Comments of disagreement centered the number of Weapons Officers, with two being too many.
- 6. Aircraft Maintenance Officer (21A3);
 - a. 100% of panel members agree with the necessity of this individual.
- 7. Aerospace Maintenance Craftsman x4 (2A571), Aerospace Maintenance Journeyman x22 (2A551), Aerospace Maintenance Apprentice x4 (2A531), Aircraft Electrical & Environmental Craftsman (2A676), Aircraft Electrical & Environmental Journeyman x2 (2A656), Aircraft Electrical & Environmental Apprentice (2A636), Aircraft Hydraulic System Journeyman x3 (2A655), Aircraft Hydraulic System Apprentice (2A635), Aerospace Propulsion Journeyman x7 (2A651), Aerospace Propulsion Apprentice (2A631);
 - a. 68% of panel members agreed on the necessity of these personnel.
 - b. Comments of disagreement centered on the specific number of each.
- 8. Integrated Avionics System Journeyman x2 (2A553A), Integrated Avionics System Apprentice x2 (2A533A), Integrated Avionics System Journeyman x4 (2A553B), Integrated Avionics System Craftsman (2A573C), Integrated Avionics System Journeyman x3 (2A553C), Aircraft Structural Maintenance Journeyman x3 (2A753), Aircraft Structural Maintenance Apprentice (2A733);
 - a. 74% of panel members agreed on the necessity of these personnel.
 - b. Comments of disagreement centered on the specific number of each.
- 9. Aircraft Metals Technology Journeyman (2A751), Aerospace Ground Equipment Journeyman x4 (2A652), Aerospace Maintenance Journeyman x4 (2A551), Aerospace Maintenance Apprentice (2A531B), Aerospace Maintenance Craftsman (for Quality Assurance) x3 (2A571).
 - a. 68% of panel members agreed on the necessity of these personnel.
 - b. Comments of disagreement centered on the specific number of each.

If the assignment of additional aircraft is not included with the integration of crews, the maintenance package can be tailored down; however, the additional aircraft use mandates a more robust maintenance package.

A few panel members opposed the idea of a standard personnel package for Total Force units. The majority believed the recommendations above were a solid starting point, except a few MWS-specific overages. This list serves as a recommended package, pared only as the Host Wing deems appropriate based on its operating construct.

Unity of Command

AFPD 90-10, Total Force Integration Policy, details a fully integrated association construct where members from different components comprise a single organization, falling under the same chain of command. No such units exist to date. Arguably, one could say it is too hard for the Air Force to get to this construct. However, getting there boils down to the legal roadblocks that must be overcome. These roadblocks severely limit the effectiveness of all associations.

Numerous students of professional military education have written on the complexities of unity of command when both Title 10 and Title 32 forces are involved. Integration in the combat environment is relatively easy, as Title 32 personnel transition to Title 10 status. In the simplest of terms, the unity of command dilemma is recapitulated as having the authority to employ and discipline forces under the UCMJ. Commanders must maintain the ability to utilize their people and maintain order and discipline regardless of Title Authority. Guard commanders face this challenge on a daily basis with their technician force. Per current legislation, ANG commanders can only discipline Guardsmen when each is in a particular pay status. Adding Active Duty members to the mix makes this task more difficult though not impossible. Whether part of a TFI unit or not, a wing commander must be able to discipline all assigned personnel and trusted to do

so in accordance with the governing directives of the member when an infraction occurs. Overcoming this roadblock requires significant amendment of current laws and regulations.

The National Commission on the Structure of the Air Force offered a possible solution to the unity of command conundrum. On the surface, the idea of a dual-status commander utilized via Memorandums of Agreement in accordance with 32 USC 325 and 32 USC 315 to eliminate unity of command issues is very appealing. Doctrinally, however, a dual-status commander is not the answer to the Total Force unity of command dilemma. The employment of a dual-status commander is a pre-planned option capable of immediate implementation in response to an emergency or major disaster on US soil. Both the President or Secretary of Defense and the governor of the affected state(s) must agree to use this vital asset on a case-by-case basis. The intended purpose of a dual-status commander is to improve unity of effort between federal and state forces as well as ensure a rapid response to save lives, prevent human suffering, and mitigate great property damage (JP 3-28, 2013). Clearly, use of a dual-status commander for long-standing command employment is not the objective. Rather, a dual-component commander is a more accurate description of the leadership sought and needed, for successful integrated Total Force partnerships. This commander needs to be trusted to provide leadership, foster relationships built on trust, and care for all assigned airmen. Despite the mechanism selected to accomplish it, a wing commander must have both operational and administrative control over all assigned personnel.

This research deliberated one alternative option. Panel members were asked if the AD personnel assigned to an integrated Total Force partnership must remain under the ADCON of an AD senior commander, would the assignment of an AD vice wing commander in addition to the ANG vice wing commander be a feasible option. The logic behind this alternative stemmed

from vice wing commanders being delegated authority when the wing commander is absent. Theoretically, the AD vice wing commander in this scenario would be afforded the administrative responsibilities of a wing commander and provide eyes-on visibility of AD members to prevent out-of-sight, out-of-mind force development issues, while still executing the mission as directed by the Host Wing Commander. This idea would require changes to current guidance and regulations in order to implement. However, 62% of panel members disagreed with the idea. They felt it did not eliminate the dual chain of command. Therefore, the unity of command issues remained. Implementing the i-Wing structure in its entirety appeared as the only viable option in this scenario.

A second contributing factor to the unity of command dilemma is that associations currently operate under Operational Direction (OPDIR). OPDIR describes how TFIA commanders are directed to achieve unity of effort at the operational level. However, OPDIR is yet another roadblock to full Total Force integration; discontinued use will increase organizational and operational effectiveness.

To reach the desired end state of totally integrated partnerships, the Host Wing Commander must be able to employ all assigned personnel to fill any and all tasked missions (except as limited by law). There should be no tasking given to a subordinate unit within a Wing, which occurs daily under the current construct. Ideally, it should be impossible to tell the difference between an Active Duty and ANG member. In an Active Association, Active Duty members would deploy if, and only if, the ANG unit deploys (as already authorized in AFI 90-1001 para 3.4). *(Note: It may be worth exploring a change to dwell rates for fully integrated units to somewhere between a traditional AD wing and traditional ANG wing).* Active Duty members would support any and all missions otherwise tasked to the ANG unit. Additionally,

Active Duty Operations Squadron Commanders integrated into a wing should only command operations personnel; maintenance and support personnel should fall under their respective Host ARC leadership. It is also imperative that Active Duty members work on the same schedule as their Host Wing, to include unit training assemblies (UTA) and other drill periods. Active Duty members would participate in Host Wing safety and wingman days, not following a schedule prescribed by AMC. Identical work schedules will also aid in balancing the force by providing exposure to the experience of the drill status guardsmen. Furthermore, all personnel assigned to an integrated partnership would fall under the Host Wing's senior rater for all administrative actions, such as performance report signatures and promotion recommendation endorsements. In order to accomplish these initiatives, Active Duty members should permanently change station to ANG units for a controlled tour length (IAW 36-2110), under said unit's senior rater identification (SRID) and personnel accounting symbol (PAS) codes. Ultimately, it should be extremely difficult to differentiate which service component a member of a fully integrated unit is a member of. Unity of command can only be accomplished if we live, train, and work as we fight, as one.

Professional Development

One of AMC's four primary objectives is the preservation of professional development. However, AMC has yet to articulate clearly what that means, let alone how to measure it. This is one area where a look at the ANG may prove to be beneficial.

A significant cultural difference between the AD and the ANG is the growing of people and building of leadership teams, which guard units tend to emphasize more than the AD due to the static nature of the unit. Leadership is crucial to the success of any organization, arguably

even more so in a Total Force Partnership with competing missions/goals. Notably, 86% of panel members felt the ARC needs to have an equal part in the selection of the AD leaders joining their team. Furthermore, 76% of panel members agree that ARC Wing Commanders should have equitable input in Phoenix Eagle, promotion, and developmental education selection processes as their AD counterparts. However, dissenting panel members felt the differences in processes and the ARC's lack of AD process knowledge was prohibitive in this endeavor. A breakout session for TFI Group and Wing Commanders at their respective Commander Courses could remedy this relatively minor roadblock.

Only one question regarding professional development in the second questionnaire did not have a decisive answer from the panel members. A nearly even split, 48% of panel members supported while 52% opposed the recommendation that first assignment airmen should not be assigned to associated or integrated partnership units. The intended target of this question was solely the assignment of enlisted personnel. Based on the comments provided, there was not a clear distinction between *first assignment* versus *first term* airmen when answering the question. Some concerns focused on local support for young airmen; others focused on missed opportunities for better technical training if limits are placed on who can serve in a Total Force unit. The final area of concern focused on the leadership, climate, and culture of the units being critical to the success of young airmen assigned to these units. **With these concerns in mind, it is my personal recommendation that *first assignment* airmen not be assigned to an Active Associate Total Force unit until they become more the standard than the exception. After initially serving in a traditional assignment, first term Airmen would adjust easily back to the culture of a traditional AD unit after serving in a partnership unit.**

Due to the unique nature of the Guard as citizen-soldiers, alternatives exist for professional development opportunities not afforded to AD members. For a fully integrated unit, 65% of panel members agree with the utilization of distance learning opportunities currently only available to ARC for AD personnel assigned to partnership units. This option would prove invaluable in sections where the loss of one individual for an extended period would be detrimental to mission accomplishment. A prime example is Airman Leadership School (ALS) by correspondence. However, in-residence attendance is preferred whenever possible as noted by the 35% of respondents who disagreed. Arguably, ALS is important enough that opportunities should be increased, so all airmen attend, regardless of their component.

To aid in manpower experience balancing, 84% of panel members agree AMC should reinstate the use of Special Experience Identifiers (SEIs) for maintenance personnel. For example, this would prevent a 7-level TSgt from one airframe from starting over as a 3-level on a new airframe. From a rank viewpoint under the current system, it looks like appropriate personnel are assigned to a unit. However, from a task completion viewpoint, this is a significant strain on maintenance operations when personnel transfer between airframes. Additionally, difference training is a major expense to unit operating budgets. This expense can be significantly reduced by reinstituting SEIs. This is a savings that can be seen at all units.

Similarly, 85% of panel members recommended the use SEIs to track the progression of personnel assigned to various types of partnerships. This simple solution could yield multiple future benefits. Identification of personnel with time spent in a Total Force unit may be a desired experience for future command or staff opportunities. Additionally, it would be relatively easy to determine if an assignment at a Total Force unit impacts career progression.

Many commanders did not feel they amply prepared for some of the unique issues encountered as part of a Total Force unit. Inclusion of a Total Force Breakout Session is recommended for the Current AMC Commander's Course for both AD and ANG personnel. This session should be at least a half if not a full day in length and cover such topics as:

- a. Command Relationships (down to the shop level)
- b. Common Duty Statuses (and associated issues such as Discipline, Pay/Overtime, Role of a Technician, etc.)
- c. What is Title 32 and what does it mean to an AD member?
- d. What is Title 5? (ART Rules, collective bargaining agreements, union issues, uniform issues, etc.)
- e. Promotion/Evaluation System (Differences in what is valued)
- f. Mobilization of ANG for Federal and State Missions
- g. ARC Deployment Rates with a Projected Schedule
- h. Crew Duty Day Rules

Moreover, 86% of panel members requested inclusion of a VTC Panel with previous TFI Squadron Commanders.

Tangential Issues

While not specifically within the boundaries of the originally stated problem, this research also explored a few contributory issues. These topics originated from comments made by various sources throughout the course of the study.

Cost-of-Living-Allowance

Panel members examined the idea of a Cost-of-Living-Allowance (COLA) for high living expense areas and locations that lack on-base dining facilities, on-base gym facilities, and

on-base childcare facilities. This area of focus stemmed from issues hindering the assignment of young airmen to Total Force units. In reality, this issue could affect personnel of any rank assigned to a Total Force unit in particular locations. This research discovered 90% of panel members agreed with the idea of an individually assessed allowance based on location, rank, and family composition in order to reduce strain on AD members assigned to certain Total Force localities. Commanders spend a preponderance of their time working personnel issues, and this issue falls squarely under a commander's responsibility of Quality of Life Engagement as outlined in AFI 1-2. The Air Force, however, must supply the tools for commander's to carry out these responsibilities. That being said, a simple, cost-effective way to implement this recommendation is through the development of a web-based questionnaire to determine the COLA to be received by each eligible member.

Simulator Access

Currently AMC expects individuals, both operations and maintenance, assigned to active associate squadrons to gain experience and upgrade at the same rate or better than their counterparts in a regular active duty flying organization as part of its objective to balance experience across the Total Force. A key part of maintaining that parity is access to a simulator, which are located at every AD CONUS base for KC-10s, KC-135s, C-17s, and C-130s. 67% of panel members agreed that active associations should gain a simulator if the expectation for training is to remain on par or better than AD units. This is especially true if units do not gain additional aircraft with the operations personnel. An increase in flying hour allocation to accomplish the required training does not address the aircraft availability piece of the equation. Indifference is intolerable towards the potentially severe impact of this course of action. Take a

C-130 unit under the current construct as an example. The mission capability goal for the C-130 fleet is 65%, which equates to an availability of 5.2 aircraft. Since you cannot have a partial aircraft, six aircraft at 75% must be available if meeting AMC's mission capable goal. First, assume the unit did not get an increase in aircraft; however, the expectation is to have two crews and one aircraft deployed on a near continuous basis. This reduces the number of aircraft on the ramp down to five. The additional aircraft usage will accelerate some of the scheduled maintenance checks required. A safe estimate is two aircraft down for required or scheduled maintenance at any given time, leaving three aircraft. These three aircraft are then needed to complete all operational and training requirements, to include formation flying, off-station trainers, JAATTs, and TACC-assigned missions. This does not account for any downtime needed to prepare the aircraft for any unusual mission types. Clearly, it would not take long before that unit is unable to safely execute its mission and maintain readiness. Therefore, either the addition of a simulator or aircraft is imperative to meeting AMC's objectives.

Other Noteworthy Issues

While some concrete recommendations stemmed from this research, there were several underlying themes worthy of mention. First, it was evident from the onset AMC's metrics were unclear. Of greatest concern, is that this confusion came from those individuals charged with leading Total Force units. How can a commander decisively lead an organization if they do not clearly understand the stated objectives they are trying to obtain?

Also problematic, many of the force development metrics are completely dependent on the member assigned to the unit and outside the direct influence or control of the unit's leadership. Is the use of that type of metric a reasonable measure of a Total Force unit's success?

Nearly all research panel members commented on one question or another that the metrics measured were not unique to a Total Force unit. These spurred several additional questions. Are non-TFI Commanders reporting anything similar or is AMC just adding to the workload of an already uniquely challenged commander? Is AMC measuring metrics just for the sake of having some metrics to measure? Is there any accountability associated with not meeting TFI standards/metrics? Questions of this nature also highlight the need for better communication/feedback.

Summary and Investigative Questions Answered:

The integration of the Total Force into a cohesive team is without a doubt challenging on many levels. This research explored issues Total Force units face, attempting to provide recommendations for future success.

Due to the diverse nature of TFI units, the narrative answers collected in Questionnaire One indicted numerous base-specific operational issues. Several items developed into reoccurring themes woven throughout the questionnaire's entirety. These issues ranged from inadequacies of metrics to difficulties dealing with dual chains of command as well as the second and third order effects of that construct, to include professional development of Airmen. These themes became the focus of Questionnaire Two.

A thorough analysis of Questionnaire One clearly indicated the metrics as currently written do not adequately reflect the effectiveness of a TFI unit. Most panel members indicated the metrics were not particular to a TFI unit, and certainly were not indicative of the unique challenges faced at the tactical level. Panel members easily identified why or how the current metrics were inadequate. However, the proposition of replacement metrics was minimal.

Based on nuggets of information gleaned from responses as well as key interviews, Questionnaire Two included a proposed perspective on future classification of Total Force units. Included in this proposal were modified objectives and metrics to support this classification. The proposed concept was widely accepted. The modified objectives and metrics as proposed were supported by 60-75% of the panel members. Objections focused on a few specific metrics or the way in which they were to be measured, not the overall concept.

Nearly every commander surveyed agreed the current TFI construct with dual chains of command was inefficient and ineffective. They expressed strong sentiment toward enhancing unity of command. The best description of the unity of command issue came in the form of an analogy by a panel member on the first questionnaire. A TFI unit is equivalent to the child of divorced parents. Each parent (service component) has their way of doing things and thinks their way is better than the other parent. The child bounces back and forth between the two parents and does its very best to please them both. Eventually, however, conflicting guidance arises and forces the child to make the best possible choice and deal with the consequences of disappointing one parent or worse, both. This only adds to the animosity between the parents. In the end, all parties are worse off than when they started. Much like parents who guide their children as one united team, TFI units will only be truly efficient and effective when the service components can learn to work together and trust each other to act in the interest of the greater Air Force good.

For the most part, Total Force leaders understand the importance of unity of command and work to resolve issues at the unit level. Much of this resolution is personality driven. Conversely, the second and third order effects of some unity of command issues remain unseen. Memorandums of Understanding or Agreement can only go so far to correct these concerns.

Institutionally we must move from unity of effort to unity of command as the future and sustainability of the Air Force lies in the Total Force team construct.

To address the unity of command concerns, an investigation into the use of a dual-status commander ensued. Having one commander in charge was obviously preferred; however, the panel members were quick to question implementation within the given legal constraints. Based on current doctrine, a dual-status commander is not the answer to the unity of command issues faced by Total Force units but provides a springboard for the idea of a dual-component commander. Several changes to laws and regulations must take place to implement this solution. This task is challenging, but not impossible.

Due to differences between RegAF and ARC units as well as unity of command issues, force development also faces many unique challenges. For example, one of the many quandries TFI units face is the feeling of being out-of-sight and, therefore, out-of-mind and the impact that has on promotions and other boarded opportunities. Total Force commanders understand the importance of developing their personnel and work together to create opportunities for that to occur within the Host Wing. Senior leaders need to understand, appreciate, and capture the value of Total Force experienced Airmen to better the Air Force as a whole.

V. Conclusions and Recommendations

*“Perfection is not attainable,
but if we chase perfection we can catch excellence.” – Vince Lombardi*

Chapter Overview

“Increasing Active-Reserve integration of headquarters and units as well as increasing the number of integrated or multicomponent (“associate”) units will lead directly to improved processes and more effective and efficient employment of the Total Air Force” (NCSAF, 2014). The question remains how does the Air Force get where it needs to be?

Conclusions of Research and Recommendations for Action

This research attempted to ascertain whether Air Mobility Command and, therefore, the Air Force was realizing the full potential of the Total Force Enterprise. Areas explored included objectives and measures of merit, unity of command issues between Title 10 and Title 32 authorities, and force development.

As detailed in Chapter IV, the following recommendations provide one potential roadmap to increase the effectiveness of the Total Force construct:

1. Objectives and Metrics

- a. Redefine Total Force Associations as Total Force Partnerships;
- b. Rewrite objectives and measures of merit based on the type of partnership desired (co-located, associated, or integrated) and provide clear definitions of each to include how each metric will be reported in order to facilitate uniformity for analysis purposes;
- c. Adopt a unit manning document with a standard operations support package and major weapon system-dependent maintenance personnel to support a

twelve crew operations squadron, which may only be pared as the Host Wing deems appropriate;

2. Unity of Command

- a. Institute a Dual-Component Commander (not a Dual-Status Commander) with complete ADCON and OPCON responsibility of all assigned personnel;
- b. Make Host Wing Commanders an integral part of the subordinate commander selection process;
- c. Control AD tour lengths in Total Force units to three years IAW 36-2110 until these units become more normalized;

3. Professional Development

- a. Allow Host Wing Commanders to have full responsibility for the Airmen assigned to their unit, to include representation of those Airmen in professional development processes;
- b. Reinstate the use of Special Experience Identifiers (SEIs) for maintenance personnel;
- c. Initiate the use of SEIs for all personnel assigned to a Total Force unit;
- d. Limit enlisted First Assignment (not First Term) Airmen from Active Associate Total Force units until these units become more normalized**;
- e. Open currently ARC-limited distance learning opportunities to all personnel, with the preference that all personnel regardless of component attend in-residence education to the maximum extent possible;
- f. Add a Total Force Breakout Session (not just an hour long briefing) to the AMC Commander's Course;

4. Tangential Issues

- a. Develop a web-based, individually assessed Cost-of-Living-Allowance based on location, rank, and family composition;
- b. Install a simulator at all Total Force locations (or ensure an increase in number of aircraft assigned with an adequate increase in maintenance personnel).

**This is my personal recommendation based on the concerns raised by the commanders and my own experience in a Total Force unit. The panel members split nearly down the middle on this issue.

The spectrum of objectives and subsequent metrics proposed in the second Delphi questionnaire and analyzed in Chapter IV attempted to address the experience-based concerns emphasized by the thirty-eight panel members in the first Delphi questionnaire. The concept of a spectrum of objectives and metrics based on the type of Total Force partnership established was met with an overwhelmingly positive response. The specifics of some metrics need further clarification to reach consensus by all parties.

Throughout both questionnaires was the resounding theme that relationships are the critical link to the success of Total Force organizations. Building partnerships is a cross-cultural undertaking to develop, guide, and sustain relationships for mutual benefit, by building trust-based relationships with both words and deeds. It is a commander's responsibility to shape and nurture that culture, through open communication and conducting operations to affect perceptions, will, behavior and capabilities of all parties involved. **Senior leaders must simplify barriers to unity of command** to afford their operational commanders the opportunity to build these vital relationships. Unity of command means all forces operate under a single commander, who has the authority to employ those forces to achieve a common goal. In order to achieve unity of command, the components first and foremost need to learn to trust each other, to work together to build on each other's strengths, to help each other overcome areas of weakness, and most importantly diminish negativity towards each other. Each is different, and that must be acceptable given the varying nature of each component's mission.

Significance of Research

One of the biggest hurdles of the Total Force Continuum is trying to integrate disparate functions into a cohesive partnership. Looking at Total Force units and defining their objectives across a spectrum may serve to optimize the effectiveness of these units. As outlined in the

Partnership Model in Figure 4, objectives and expectations are critical to successful unions. AMC can benefit from studying the commercial industry's lessons learned to help posture itself for future success. Lambert, Emmelhainz, and Gardner's Partnership Model is ideal for this type of business case analysis.

Along a similar note, another important message gleaned from this research was well outside the intended scope of this project. For Total Force partnerships to be successful, each component partner must find some value in the union with shared priorities/goals/interests. It remains unclear whether the Air Force has established these shared values between components. If it has, they are not explicitly expressed, which makes it difficult for commanders to execute effectively. While partnerships between components have many benefits, many of them are difficult to measure. This research highlighted one of the greatest benefits of Total Force partnerships: exposure affords both AD and ARC members the opportunity to gain a sound understanding of the strengths of each component and their unique contributions to the defense of our nation. Future leaders will be better equipped to implement sound policies and procedures based on best practices learned and observed through working in the intimate confines of a Total Force partnership.

Recommendations for Future Research

- Are the Guard and Reserve still regarded as strategic reserve? If not, can associations truly provide surge and rotational capacity as outlined in AFI 90-1001?
- Explicate Dual-Component Commander, with clearly-defined roles and responsibilities, as well as the necessary changes to current law to legally bestow those responsibilities.
- Should fully integrated Total Force unit deploy-to-dwell rates fall somewhere between a traditional AD wing and traditional ANG wing? Is it sustainable?
- Develop a Cost-of-Living Allowance formula with web-based implementation for active duty personnel assigned to community-based ANG Total Force units.

- In 3-5 years assess career progression of individuals assigned to Total Force units.

Summary

The level of understanding needed to optimize our Total Force cannot be taught in a classroom or learned from a textbook, but is only gained through experience and relationships formed through Total Force integrations. Total Force units epitomize the Air Force leadership laboratory, and we must work towards perfecting this concept. The Air Force must continue to harvest the lessons learned from those assigned to Total Force units demanding continual improvement. Periodic re-evaluation of objectives and measures of merit will serve this purpose well. Nestled in AMC's objectives is the professional development of its Airmen. Theoretically, associations maximize the efficient and effective use of assets; Airmen are our most critical asset. AMC cannot afford to overlook or minimize the deliberate development of our Airmen. Minimizing unity of command obstacles will only increase the effectiveness leaders at all levels will have in executing the Total Force mission, as well as the development of its Airmen.

Appendix A. Round One Questionnaire

Questionnaire One: Initial Inputs Measuring the Effectiveness of Active Associate Total Force Integration Units

You are receiving this questionnaire as a current or former squadron, group, or wing commander of a Total Force Integration (TFI) unit, administratively or operationally. The purpose of this research is to conduct a qualitative study in an effort to ascertain the effectiveness of the current metrics and construct as well as provide recommendations for updated metrics, unity of command issues, and deliberate force development. By responding, you have the unique opportunity to influence and shape the future of Air Force Total Force Integration Associations.

Please note the following:

Survey Process: This questionnaire is an instrument of a Delphi study, in which a set of questionnaires is designed to focus on problems, opportunities, solutions or forecasts. Each questionnaire is developed based on the group results of the previous questionnaire. The process continues until the research question is ultimately answered, for example, when consensus is reached, or sufficient information has been exchanged. This on average takes three to four rounds with the panel. There are numerous research questions for this round. The following rounds will be considerably shorter and less time-consuming.

Benefits and risks: There are no personal risks for participating in this study, and only the benefit of improving the Air Force's execution of the TFI Active Associate construct. There is a significant upfront time investment for this study. Your participation in completing this study should take no more than two hours for the first round and less than 30 minutes for each additional round.

Confidentiality: Questionnaire responses are completely confidential. At the end of the questionnaire, you may include your contact information for follow-up. If you choose to do so, rest assured your identity will remain confidential. My final research report will not tie your identity with any responses you provide, as only aggregate data will be published. If you would like to be listed in the acknowledgments section of my final paper, please indicate so at the end of the questionnaire.

Voluntary consent: Your participation in this study is completely voluntary. You have the right to decline to answer any question, to refuse to participate or to withdraw at any time, without penalty. Completion of the questionnaire implies your consent to participate.

Thank you for your participation in this research. I sincerely appreciate your time and forthright responses.

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Demographic Information

1. Which Service Component are you a member of?				AD	AFRC	ANG
2. Which TFI unit did you command?						
3. Which MWS(s) was associated with your unit?	C-5	C-17	C-40	C-130	KC-10	KC-135
4. What type of association was your unit?			Classic	Active		
5. Is there a simulator within reasonable driving distance of your location that your crew members can use to maintain currency and proficiency?					YES	NO
6. Were aircraft gained with this association (i.e., increase in PAA from 8 to 12)? If so, how many?				YES	NO	#
7. Approximately how many operations personnel were gained with this association?						
8. Approximately how many maintenance personnel were gained with this association?						
9. Approximately how many support personnel were gained with this association?						
10. If support personnel were gained, please specify types of personnel (i.e., SARM, AFE, Intel, CSS, FM, First Sergeant, etc.):						
11. What personnel, if any, were not included on your UMD that would have made your unit more effective?						
12. Please specify any other major assets gained with this association if any.						

The subsequent pages list AMC's TFI Objectives and Measures of Merit. Following each Objective is a series of statements. Please rate each statement using the **Level of Agreement** scale shown and elaborate on your answers to the maximum extent possible.

Level of Agreement

1 – Strongly Disagree; 2 – Disagree; 3 – Somewhat Disagree; 4 – Neutral; 5 – Somewhat Agree; 6 – Agree; 7 – Strongly Agree

Objective 1: Access to Iron

Active duty flying ARC aircraft for training and deployments

Measures of Merit:

1.1 Mission Capable Rates

1.2 ARC Utilization Rates

13. Access to Iron (<i>Active duty flying ARC aircraft for training and deployments</i>) as an objective adequately conveys the effectiveness of TFI Associations.	1	2	3	4	5	6	7
Please elaborate.							
14. Mission Capable Rates as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
15. ARC Utilization Rates as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
16. Increased use of aircraft drives an increase in maintenance. My unit's maintenance manning, and skill levels were sufficient to keep MC rates stable.	1	2	3	4	5	6	7
Please elaborate.							
17. Utilization of different pots of money or other legal issues (State vs. Federal mission, etc.) prohibited the use of component personnel on certain missions.	1	2	3	4	5	6	7
Please elaborate.							

18. A typical ARC JAATT costs both man-days and per diem. Utilizing AD personnel along with ARC personnel on the same mission saves money in terms of man-days expended. I supported/encouraged/required blending of crews in my unit for this reason.	1	2	3	4	5	6	7
Please elaborate.							
19. If your unit has a special mission (MAFFS, SKI, or other State msns), please annotate it here:							
20. For special mission units only: AD personnel were fully integrated into the flying mission.	1	2	3	4	5	6	7
Please elaborate.							
21. TFI associations should be limited to those units without special missions.	1	2	3	4	5	6	7
Please elaborate.							

Objective 2: Increase Availability to Support Combat and Training Requirements

Additional ARC aircraft are made available to support deployed and training missions. Dwell to deploy rates at active associate units should be on par with their counterparts at non-active associate units.

Measures of Merit:

2.1 Maintain Parity for AD Deploy-to-Dwell Rates and Mx Deploy to Dwell Rates

2.2 ARC Volunteerism

2.3 Daily ARC Aircraft Deployed to Combatant Command

2.4 Operations/Mx Temporary Duty (Avg Days/Year)

22. Increase Availability to Support Combat and Training Requirements (<i>Additional ARC aircraft are made available to support deployed and training missions; dwell to deploy rates at active associate units should be on par with their counterparts at non-active associate units</i>) as an objective adequately conveys the effectiveness of TFI Associations.	1	2	3	4	5	6	7
Please elaborate.							
23. Parity for AD and Mx Deploy-to-Dwell Rates as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
24. ARC Volunteerism as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please define what this metric means to you and then elaborate on your rating.							
25. Daily ARC Aircraft Deployed to Combatant Command as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
26. Prior to Active Associations (~2006 to present), the Combatant Commanders were adequately supported by the ARC.	1	2	3	4	5	6	7
27. A targeted increase in ARC aircraft availability to Combatant Command was explicitly stated.	1	2	3	4	5	6	7
If so, what was it?							
28. Operations/Mx Temporary Duty (Avg Days/Year) as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							

29. AMC's stated objective is to increase availability to support training requirements. What measure of merit was your unit using to determine such an increase? What measure of merit would you recommend for this objective?							
30. What was your expectation for filling deployment taskings between the AD and ARC? Was there an MOU prescribing these expectations? Were deployments executed as planned per these expectations?							
31. My TFI squadron deployed on par with all other units of the same MWS.	1	2	3	4	5	6	7
If disagree, please elaborate.							
If disagree, were any specific AFSCs tasked more frequently?							
32. In terms of ARC deployment volunteerism: The close proximity to AD personnel in TFI units made ARC personnel more aware of the current AD deployment tempo and provided easier access to deployment opportunities, thereby increasing volunteerism.	1	2	3	4	5	6	7
Please elaborate.							
33. AD and ARC personnel blended to meet deployment tasking requirements.	1	2	3	4	5	6	7
Please elaborate.							
34. AD UTCs should be integrated into the ARC Host Wing's commitments.	1	2	3	4	5	6	7
Please elaborate.							

Objective 3: Balance Aircrew Maintenance (Mx) Experience Levels Across the Total Force

Individuals assigned to active associate squadrons should gain experience and upgrade at the same or better than their counterparts in a regular active duty flying organization.

Measures of Merit:

3.1 Inexperienced Aging Rates for Ops

3.2 Inexperienced Aging Rates for Mx

35. Balance Aircrew Maintenance (Mx) Experience Levels Across the Total Force (Individuals assigned to active associate squadrons should gain experience and upgrade at the same or better than their counterparts in a regular active duty flying organization) as an objective adequately conveys the effectiveness of TFI Associations.	1	2	3	4	5	6	7
Please elaborate.							
36. Inexperienced Aging Rates for Ops is an appropriate metric for this objective.	1	2	3	4	5	6	7
Please elaborate.							
37. Inexperienced Aging Rates for Ops as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
38. Inexperienced Aging Rates for Mx as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
39. From a whole-person perspective, a TFI unit is a good fit for a young first-term AD airmen. (Please consider professional and personal development as well as personnel support (dorms, dining facilities, etc.) and cultural differences of the ARC).	1	2	3	4	5	6	7
Please elaborate.							
40. For ARC maintainers, manning and skill levels of full-time technicians are balanced to teach/train/mentor first-term AD airmen.	1	2	3	4	5	6	7
Please elaborate.							

41. My wing was postured to provide the breadth and depth of experience AMC was expecting in order to upgrade its less experienced AD force on par or better than non-associated units.	1	2	3	4	5	6	7
Please elaborate.							
42. This experience/knowledge was primarily only available in garrison.	1	2	3	4	5	6	7
Please elaborate.							

Objective 4: Preserve Professional Development

Being assigned to a TFI unit should afford Airmen equal opportunities to meet their professional development gates as well as or better than their counterparts at non-active associations.

Measures of Merit:

4.1 Advanced Academic Degree Completion

4.2 Professional Military Education Completion

4.3 Retention Rates

4.4 Enlisted Promotion Rates

43. Preserve Professional Development (<i>Being assigned to a TFI unit should afford Airmen equal opportunities to meet their professional development gates as well as or better than their counterparts at non-active associations</i>) as an objective adequately conveys the effectiveness of TFI Associations.	1	2	3	4	5	6	7
Please elaborate.							
44. Advanced Academic Degree Completion for AD as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
45. Since Advanced Academic Degree completion is masked until Col promotion boards, it is now an obsolete metric.	1	2	3	4	5	6	7
Please elaborate.							
46. Professional Military Education Completion for AD as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
47. AD Retention Rates as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
48. AD Enlisted Promotion Rates as a metric adequately conveys the effectiveness of a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
49. One professional development gate not addressed by AMC's measures of merit is that of meeting flight hour/gate month requirements. ARC leaders and the TFI construct provides AD rated officers the opportunity to meet their flying hour gates, on par with their counterparts in regular active duty squadrons.	1	2	3	4	5	6	7
Please elaborate.							
50. How did your unit balance growing AD and ARC professionals from a career development perspective (ie job progression, experience at group and wing level, stratifications, NCOA/SNCOA/IDE/SDE recommendations, etc)?							

51. AD Sq/Det Commanders Only: To the best of your recollection, how many personnel were selected to attend IDE while assigned to your unit? Please include an approximation of the number of personnel eligible. Also, please do not include anyone who PCS'd into your unit as an IDE select.							
52. If your wing was integrating AD personnel into key leadership positions, please list them (i.e., wing or group exec, Chief of Safety, Maintenance Superintendent, etc.).							
53. For AD personnel in Wing or Group positions, who was assigned as their rater, additional rater, and reviewer? Do you feel this was the right chain?							
54. My top performers were ranked where I would have expected them to be at group and wing levels, had they not been assigned to a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
If not, what actions would you recommend to mitigate this issue?							
55. AD commitments that affect continuity (PME attendance, deployments, PCS turnover, special projects) make it difficult or not worth the investment to put AD personnel in key leadership positions.	1	2	3	4	5	6	7
Please elaborate.							
56. In terms of career progression, AD personnel are negatively affected by an assignment in a TFI unit.	1	2	3	4	5	6	7
Please elaborate.							
57. In general, do you feel the AF is in the business of developing leaders or providing combat capability? Please explain.							

Overall Metric Questions:

58. I was aware of these four objectives and subsequent measures of merit.	1	2	3	4	5	6	7
59. I was provided sufficient feedback on how my unit was performing with regards to these metrics.	1	2	3	4	5	6	7
60. How often was feedback provided?	Weekly	Monthly	Quarterly	Semi-Annually	Annually		
61. In what format was feedback provided? (i.e., One-on-One, Weekly Sq/CC DCO, Council of Colonels)							
62. I would recommend MWS specific metrics to accurately measure TFI effectiveness.	1	2	3	4	5	6	7
If so, what would you recommend?							
63. Based on my TFI experience, I would recommend additional or alternative objectives and/or measures of merit.	1	2	3	4	5	6	7
If so, what would you recommend?							
64. If additional aircraft are not provided with AD personnel, what issues are encountered?							
65. If additional aircraft are not provided with AD personnel, but access to a regional simulator (perhaps 5 or 6 across the country) were made available for use other than just annual ORM/CRM training, the increased training requirements would be manageable.	1	2	3	4	5	6	7
Please elaborate.							
66. ARC Sq/Grp CC's Only: If additional aircraft are not provided with AD personnel, how many people in the following scenarios could you absorb with minimal impact (think possible detachments vs. a squadron)?							

Aircrew only?
 Aircrew with maintenance personnel?
 Aircrew, maintenance, and support personnel?

Additional Questions Not Metric Related:

67. The overall success of a TFIA is dependent upon or influenced by the personalities involved.	1	2	3	4	5	6	7
Please elaborate.							
68. The ARC had input in the selection of the AD leadership being assigned, primarily the Squadron Commander (or Director of Operations in the case of fly-up planning).	1	2	3	4	5	6	7
Please elaborate.							
69. With regards to the previous question, to what extent should the ARC be involved?							
70. Normally in Active Associate TFI units, the ARC unit has OPDIR (Operational Direction) over assigned AD personnel, but ADCON (Administrative Control) remains with a parent wing, and some units may also receive support from and limited accountability to a third unit. Dual chains of command are efficient and effective.	1	2	3	4	5	6	7
Please elaborate (to include ideas to improve efficiency).							
71. ADCON over all personnel assigned to your Wing would enhance unity of command?	1	2	3	4	5	6	7
Please elaborate.							
72. I experienced unity of command issues specific to Title 10/Title 32.	1	2	3	4	5	6	7
If so, please briefly detail the issue and how it was handled.							
73. I felt prepared and equipped to deal with Title 10/Title 32 issues?	1	2	3	4	5	6	7
Please elaborate.							
74. Human Resources type (business rules for managing AD) training or component specific training would have been beneficial prior to taking command.	1	2	3	4	5	6	7
If so, what specific training would you recommend?							
75. A dual-status (Title 10/32) group and wing commander, when associated with TFI units, could eliminate current roadblocks attributed to Title 32 status.	1	2	3	4	5	6	7
Please elaborate and include issues to be mitigated.							

Thank you for your participation. I know your time is valuable, and I appreciate your willingness to assist in my research and enhance the future of TFI associations.

76. Please provide any additional comments or elaborate on previous answers here.		
77. I would like to be included in the acknowledgments section of the final report.	YES	NO
If so, please provide contact information here.		
78. OPTIONAL: If you would like to provide your name and contact information or follow-up purposes only, please do so here. Your identity and participation in this study will remain confidential.		

Appendix B. Round One Questionnaire Results

	Q13	Q14	Q15	Q16	Q17	Q18	Q20	Q21
Sample Mean	5.105	4.763	4.973	5.000	4.865	5.568	4.318	2.086
Sample Variance	2.962	3.050	2.805	3.886	3.509	3.363	4.894	1.434
Sample Std Dev	1.721	1.747	1.675	1.971	1.873	1.834	2.212	1.197
Max Range	6.826	6.510	6.648	6.971	6.738	7.402	6.530	3.283
Min Range	3.384	3.017	3.298	3.029	2.992	3.734	2.106	0.888

AD Mean	5.182	4.864	4.857	5.143	4.667	5.762	5.000	2.211
AD Variance	3.965	3.647	3.229	4.029	3.933	2.590	3.273	1.842
AD Std Dev	1.991	1.910	1.797	2.007	1.983	1.609	1.809	1.357

AFRC Mean	5.500	5.125	5.375	4.750	4.625	5.750	3.600	1.750
AFRC Variance	0.857	2.411	1.696	5.071	3.411	4.214	9.800	0.500
AFRC Std Dev	0.926	1.553	1.302	2.252	1.847	2.053	3.130	0.707

ANG Mean	4.500	4.125	4.875	4.857	5.625	4.875	3.400	2.125
ANG Variance	2.286	2.125	3.268	3.143	2.554	4.982	3.800	1.554
ANG Std Dev	1.512	1.458	1.808	1.773	1.598	2.232	1.949	1.246

ARC Mean	5.000	4.625	5.125	4.800	5.125	5.313	3.500	1.938
ARC Variance	1.733	2.383	2.383	3.886	3.050	4.496	6.056	0.996
ARC Std Dev	1.317	1.544	1.544	1.971	1.746	2.120	2.461	0.998

Component T-Test	0.737	0.673	0.629	0.613	0.461	0.486	0.129	0.499
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Wg/CC Mean	4.875	4.375	4.875	5.250	4.375	5.125	3.400	1.500
Wg/CC Variance	0.411	2.554	1.839	3.929	4.554	6.696	8.300	0.286
Wg/CC Std Dev	0.641	1.598	1.356	1.982	2.134	2.588	2.881	0.535

Grp/CC Mean	4.667	4.889	4.750	4.625	6.125	5.625	3.667	2.375
Grp/CC Variance	4.750	3.111	5.357	4.268	0.696	3.125	4.267	1.411
Grp/CC Std Dev	2.179	1.764	2.315	2.066	0.835	1.768	2.066	1.188

Sen Leader Mean	4.765	4.647	4.813	4.938	5.250	5.375	3.545	1.938
Sen Leader Variance	2.566	2.743	3.363	3.929	3.267	4.650	5.473	0.996
Sen Leader Std Dev	1.602	1.656	1.834	1.982	1.807	2.156	2.339	0.998

Sq/CC Mean	5.381	4.857	5.095	5.050	4.571	5.714	5.091	2.211
Sq/CC Variance	3.248	3.429	2.490	4.050	3.657	2.514	3.491	1.842
Sq/CC Std Dev	1.802	1.852	1.578	2.012	1.912	1.586	1.868	1.357

Position T-Test	0.272	0.715	0.626	0.868	0.278	0.601	0.103	0.499
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C-130 Mean	5.429	5.333	5.190	4.952	4.238	5.286	4.067	1.905
C-130 Variance	2.157	1.933	2.862	4.548	3.490	4.114	5.638	1.190
C-130 Std Dev	1.469	1.390	1.692	2.133	1.868	2.028	2.374	1.091

KC-135 Mean	4.667	4.133	4.643	4.769	6.071	5.857	4.500	2.500
KC-135 Variance	4.238	3.838	3.170	3.026	0.995	2.593	3.100	1.909
KC-135 Std Dev	2.059	1.959	1.781	1.739	0.997	1.610	1.761	1.382

MWS T-Test	0.232	0.053	0.371	0.787	0.001	0.362	0.654	0.216
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	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q31	Q32	Q33	Q34
Sample Mean	4.824	4.424	3.848	4.412	4.969	4.879	4.265	5.636	5.353	5.529	5.176
Sample Variance	2.271	2.377	2.633	2.250	2.031	2.172	1.837	1.801	2.538	1.772	2.513
Sample Std Dev	1.507	1.542	1.623	1.500	1.425	1.474	1.355	1.342	1.593	1.331	1.585
Max Range	6.330	5.966	5.471	5.912	6.394	6.353	5.620	6.978	6.946	6.861	6.762
Min Range	3.317	2.883	2.226	2.912	3.544	3.405	2.909	4.294	3.760	4.198	3.591

AD Mean	5.000	4.579	4.368	4.700	4.278	4.737	4.500	5.800	5.750	5.900	5.150
AD Variance	2.211	2.480	1.801	2.011	1.507	3.094	1.842	1.958	1.355	1.042	2.976
AD Std Dev	1.487	1.575	1.342	1.418	1.227	1.759	1.357	1.399	1.164	1.021	1.725

AFRC Mean	4.571	4.714	2.571	3.857	5.571	4.571	4.000	5.571	4.286	5.143	5.143
AFRC Variance	1.286	0.905	2.952	2.810	2.286	1.286	2.667	1.286	5.238	1.143	2.476
AFRC Std Dev	1.134	0.951	1.718	1.676	1.512	1.134	1.633	1.134	2.289	1.069	1.574

ANG Mean	4.571	3.714	3.714	4.143	6.143	5.571	3.857	5.167	5.286	4.857	5.286
ANG Variance	3.952	3.571	2.905	2.476	0.476	0.286	1.143	2.167	2.571	4.143	1.905
ANG Std Dev	1.988	1.890	1.704	1.574	0.690	0.535	1.069	1.472	1.604	2.035	1.380

ARC Mean	4.571	4.214	3.143	4.000	5.857	5.071	3.929	5.385	4.786	5.000	5.214
ARC Variance	2.418	2.335	3.055	2.462	1.363	0.995	1.764	1.590	3.874	2.462	2.027
ARC Std Dev	1.555	1.528	1.748	1.569	1.167	0.997	1.328	1.261	1.968	1.569	1.424

Component T-Test	0.428	0.509	0.039	0.194	0.001	0.494	0.231	0.384	0.117	0.074	0.906
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Wg/CC Mean	4.625	4.250	2.500	3.125	6.250	5.000	3.875	5.500	4.125	5.000	5.375
Wg/CC Variance	3.125	2.214	2.000	1.839	1.071	1.143	2.696	1.714	5.839	2.857	1.696
Wg/CC Std Dev	1.768	1.488	1.414	1.356	1.035	1.069	1.642	1.309	2.416	1.690	1.302

Grp/CC Mean	4.000	3.500	3.333	4.500	5.400	4.500	3.500	5.600	5.500	5.167	4.833
Grp/CC Variance	2.800	4.300	3.067	2.300	1.800	3.900	1.100	2.300	0.300	2.967	2.567
Grp/CC Std Dev	1.673	2.074	1.751	1.517	1.342	1.975	1.049	1.517	0.548	1.722	1.602

Sen Leader Mean	4.357	3.929	2.857	3.714	5.923	4.786	3.714	5.538	4.714	5.071	5.143
Sen Leader Variance	2.863	2.995	2.440	2.374	1.410	2.181	1.912	1.769	3.758	2.687	1.978
Sen Leader Std Dev	1.692	1.730	1.562	1.541	1.188	1.477	1.383	1.330	1.939	1.639	1.406

Sq/CC Mean	5.150	4.789	4.579	4.900	4.316	4.947	4.650	5.700	5.800	5.850	5.200
Sq/CC Variance	1.713	1.731	1.591	1.674	1.450	2.275	1.503	1.905	1.326	0.976	3.011
Sq/CC Std Dev	1.309	1.316	1.261	1.294	1.204	1.508	1.226	1.380	1.152	0.988	1.735

Position T-Test	0.154	0.132	0.002	0.027	0.001	0.760	0.052	0.740	0.076	0.129	0.916
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C-130 Mean	5.158	4.944	4.222	4.579	4.722	5.222	4.368	5.684	5.421	5.684	5.000
C-130 Variance	1.918	1.703	2.418	2.702	2.330	2.301	2.246	1.673	2.702	1.895	1.889
C-130 Std Dev	1.385	1.305	1.555	1.644	1.526	1.517	1.499	1.293	1.644	1.376	1.374

KC-135 Mean	4.462	3.846	3.615	4.308	5.250	4.538	4.000	5.667	5.538	5.462	5.385
KC-135 Variance	2.769	2.974	2.590	1.897	1.477	1.936	1.333	2.242	1.269	1.769	3.590
KC-135 Std Dev	1.664	1.725	1.609	1.377	1.215	1.391	1.155	1.497	1.127	1.330	1.895

MWS T-Test	0.227	0.067	0.303	0.617	0.303	0.205	0.439	0.974	0.812	0.650	0.537
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	Q35	Q36	Q37	Q38	Q39	Q40	Q41	Q42
Sample Mean	5.969	5.344	5.063	5.250	3.938	4.656	5.531	3.097
Sample Variance	1.257	1.910	2.319	2.000	4.512	3.652	3.225	2.357
Sample Std Dev	1.121	1.382	1.523	1.414	2.124	1.911	1.796	1.535
Max Range	7.090	6.726	6.585	6.664	6.062	6.567	7.327	4.632
Min Range	4.848	3.962	3.540	3.836	1.813	2.745	3.735	1.562

AD Mean	5.833	5.444	5.278	5.333	3.556	4.167	5.167	2.941
AD Variance	2.029	2.967	2.918	2.824	5.908	4.853	4.971	2.184
AD Std Dev	1.425	1.723	1.708	1.680	2.431	2.203	2.229	1.478

AFRC Mean	6.143	5.000	4.286	4.857	5.000	5.571	6.000	3.714
AFRC Variance	0.476	0.667	2.238	1.143	2.333	1.286	1.000	2.571
AFRC Std Dev	0.690	0.816	1.496	1.069	1.528	1.134	1.000	1.604

ANG Mean	6.143	5.429	5.286	5.429	3.857	5.000	6.000	2.857
ANG Variance	0.143	0.619	0.571	0.952	2.476	2.000	0.667	2.810
ANG Std Dev	0.378	0.787	0.756	0.976	1.574	1.414	0.816	1.676

ARC Mean	6.143	5.214	4.786	5.143	4.429	5.286	6.000	3.286
ARC Variance	0.286	0.643	1.566	1.055	2.571	1.604	0.769	2.681
ARC Std Dev	0.535	0.802	1.251	1.027	1.604	1.267	0.877	1.637

Component T-Test	0.405	0.620	0.355	0.696	0.232	0.082	0.161	0.548
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Wg/CC Mean	6.250	5.625	4.750	5.250	4.500	5.750	5.875	3.500
Wg/CC Variance	0.214	0.268	2.214	1.357	2.000	0.786	0.982	4.286
Wg/CC Std Dev	0.463	0.518	1.488	1.165	1.414	0.886	0.991	2.070

Grp/CC Mean	5.333	4.167	4.333	4.500	3.500	4.500	5.333	2.667
Grp/CC Variance	3.067	1.767	2.267	2.300	4.700	3.500	3.067	1.467
Grp/CC Std Dev	1.751	1.329	1.506	1.517	2.168	1.871	1.751	1.211

Sen Leader Mean	5.857	5.000	4.571	4.929	4.071	5.214	5.643	3.143
Sen Leader Variance	1.516	1.385	2.110	1.764	3.148	2.181	1.786	3.055
Sen Leader Std Dev	1.231	1.177	1.453	1.328	1.774	1.477	1.336	1.748

Sq/CC Mean	6.056	5.611	5.444	5.500	3.833	4.222	5.444	3.059
Sq/CC Variance	1.114	2.252	2.261	2.147	5.794	4.536	4.497	1.934
Sq/CC Std Dev	1.056	1.501	1.504	1.465	2.407	2.130	2.121	1.391

Position T-Test	0.635	0.206	0.108	0.258	0.750	0.131	0.749	0.885
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C-130 Mean	6.368	5.579	5.316	5.526	4.368	5.158	5.421	3.333
C-130 Variance	0.357	2.146	2.673	1.930	4.023	2.140	3.480	2.000
C-130 Std Dev	0.597	1.465	1.635	1.389	2.006	1.463	1.865	1.414

KC-135 Mean	5.273	4.909	4.818	5.000	2.909	3.545	5.636	2.273
KC-135 Variance	2.418	1.691	1.764	2.000	4.691	5.073	3.655	1.618
KC-135 Std Dev	1.555	1.300	1.328	1.414	2.166	2.252	1.912	1.272

MWS T-Test	0.045	0.207	0.373	0.334	0.083	0.050	0.767	0.048
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	Q43	Q44	Q45	Q46	Q47	Q48	Q49	Q54	Q55	Q56
Sample Mean	5.200	3.571	4.821	4.214	4.172	4.655	5.929	4.960	2.857	3.259
Sample Variance	3.821	3.513	4.078	3.434	4.076	4.020	1.328	3.290	3.312	2.199
Sample Std Dev	1.955	1.874	2.019	1.853	2.019	2.005	1.152	1.814	1.820	1.483
Max Range	7.155	5.446	6.841	6.067	6.191	6.660	7.081	6.774	4.677	4.742
Min Range	3.245	1.697	2.802	2.361	2.153	2.650	4.776	3.146	1.037	1.776

AD Mean	5.389	3.588	4.765	4.588	4.056	4.389	6.056	5.412	2.333	3.059
AD Variance	3.546	3.507	4.566	4.007	4.173	4.958	1.232	2.757	2.000	2.559
AD Std Dev	1.883	1.873	2.137	2.002	2.043	2.227	1.110	1.661	1.414	1.600

AFRC Mean	6.000	4.000	5.167	4.000	4.000	5.500	6.000	4.167	2.333	3.667
AFRC Variance	2.400	4.400	4.567	2.000	4.400	1.900	1.500	3.767	1.467	1.067
AFRC Std Dev	1.549	2.098	2.137	1.414	2.098	1.378	1.225	1.941	1.211	1.033

ANG Mean	3.833	3.000	4.600	3.200	4.800	4.600	5.400	3.500	6.000	3.500
ANG Variance	4.567	3.500	3.300	2.700	4.700	3.300	1.800	4.500	0.667	3.000
ANG Std Dev	2.137	1.871	1.817	1.643	2.168	1.817	1.342	2.121	0.816	1.732

ARC Mean	4.917	3.545	4.909	3.636	4.364	5.091	5.700	4.000	3.800	3.600
ARC Variance	4.447	3.873	3.691	2.255	4.255	2.491	1.567	3.429	4.622	1.600
ARC Std Dev	2.109	1.968	1.921	1.502	2.063	1.578	1.252	1.852	2.150	1.265

Component T-Test	0.537	0.955	0.854	0.164	0.699	0.331	0.464	0.090	0.074	0.342
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Wg/CC Mean	5.500	3.000	6.200	3.400	4.200	5.800	5.800	2.750	3.600	3.400
Wg/CC Variance	4.300	4.000	3.200	3.800	5.200	0.700	1.200	0.917	6.800	3.300
Wg/CC Std Dev	2.074	2.000	1.789	1.949	2.280	0.837	1.095	0.957	2.608	1.817

Grp/CC Mean	3.667	3.333	4.500	3.167	3.500	3.833	5.000	5.500	4.000	3.200
Grp/CC Variance	6.267	5.067	3.100	2.167	4.300	5.367	2.000	3.000	3.500	1.700
Grp/CC Std Dev	2.503	2.251	1.761	1.472	2.074	2.317	1.414	1.732	1.871	1.304

Sen Leader Mean	4.583	3.182	5.273	3.273	3.818	4.727	5.400	4.125	3.800	3.300
Sen Leader Variance	5.720	4.164	3.618	2.618	4.364	4.018	1.600	3.839	4.622	2.233
Sen Leader Std Dev	2.392	2.040	1.902	1.618	2.089	2.005	1.265	1.959	2.150	1.494

Sq/CC Mean	5.611	3.824	4.529	4.824	4.389	4.611	6.222	5.353	2.333	3.235
Sq/CC Variance	2.369	3.154	4.390	3.154	4.016	4.252	1.007	2.743	2.000	2.316
Sq/CC Std Dev	1.539	1.776	2.095	1.776	2.004	2.062	1.003	1.656	1.414	1.522

Position T-Test	0.205	0.403	0.342	0.026	0.477	0.882	0.097	0.151	0.074	0.915
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C-130 Mean	6.056	3.875	4.688	4.500	4.353	5.353	5.941	4.800	2.235	3.438
C-130 Variance	1.820	3.583	3.829	3.467	4.368	2.743	1.559	4.171	1.566	2.529
C-130 Std Dev	1.349	1.893	1.957	1.862	2.090	1.656	1.249	2.042	1.251	1.590

KC-135 Mean	3.727	3.273	4.818	4.000	3.727	3.455	5.900	5.333	3.800	2.900
KC-135 Variance	4.218	3.618	4.764	3.400	3.818	4.273	1.211	2.250	5.289	1.878
KC-135 Std Dev	2.054	1.902	2.183	1.844	1.954	2.067	1.101	1.500	2.300	1.370

MWS T-Test	0.004	0.427	0.875	0.498	0.429	0.020	0.930	0.471	0.070	0.371
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	Q58	Q59	Q62	Q63	Q64	Q67	Q68	Q70	Q71	Q72	Q73	Q74	Q75
Sample Mean	5.071	4.778	5.000	4.407	4.538	6.185	5.037	2.481	5.731	4.440	4.269	4.962	4.760
Sample Variance	4.439	4.256	2.231	1.328	2.178	2.772	4.652	2.644	1.965	3.840	2.845	1.878	2.773
Sample Std Dev	2.107	2.063	1.494	1.152	1.476	1.665	2.157	1.626	1.402	1.960	1.687	1.371	1.665
Max Range	7.178	6.841	6.494	5.560	6.014	7.850	7.194	4.107	7.132	6.400	5.956	6.332	6.425
Min Range	2.964	2.715	3.506	3.255	3.063	4.520	2.880	0.855	4.329	2.480	2.583	3.591	3.095
AD Mean	4.833	4.444	5.235	4.412	4.500	6.412	5.176	2.471	5.625	4.563	4.063	5.250	5.467
AD Variance	5.794	5.203	2.566	1.882	2.400	2.257	4.654	3.015	2.383	4.396	3.529	2.200	1.838
AD Std Dev	2.407	2.281	1.602	1.372	1.549	1.502	2.157	1.736	1.544	2.097	1.879	1.483	1.356
AFRC Mean	5.800	6.250	4.800	4.200	5.000	6.400	4.000	2.600	6.000	4.000	4.400	4.600	4.200
AFRC Variance	0.700	0.250	0.700	0.200	1.500	0.300	5.000	4.300	3.000	5.333	2.300	1.300	2.200
AFRC Std Dev	0.837	0.500	0.837	0.447	1.225	0.548	2.236	2.074	1.732	2.309	1.517	1.140	1.483
ANG Mean	5.200	4.800	4.400	4.600	4.200	5.200	5.600	2.400	5.800	4.400	4.800	4.400	3.200
ANG Variance	3.700	2.700	2.800	0.800	2.700	7.200	4.800	0.800	0.200	2.300	1.700	1.300	2.700
ANG Std Dev	1.924	1.643	1.673	0.894	1.643	2.683	2.191	0.894	0.447	1.517	1.304	1.140	1.643
ARC Mean	5.500	5.444	4.600	4.400	4.600	5.800	4.800	2.500	5.900	4.222	4.600	4.500	3.700
ARC Variance	2.056	2.028	1.600	0.489	2.044	3.733	5.067	2.278	1.433	3.194	1.822	1.167	2.456
ARC Std Dev	1.434	1.424	1.265	0.699	1.430	1.932	2.251	1.509	1.197	1.787	1.350	1.080	1.567
Component T-Test	0.367	0.176	0.266	0.977	0.868	0.403	0.675	0.964	0.616	0.673	0.406	0.150	0.010
Wg/CC Mean	6.250	6.000	4.750	4.750	4.500	5.000	5.500	2.000	5.250	3.000	5.500	4.750	4.500
Wg/CC Variance	0.917	0.667	3.583	0.917	1.000	7.333	9.000	0.667	2.250	3.000	0.333	0.250	3.000
Wg/CC Std Dev	0.957	0.816	1.893	0.957	1.000	2.708	3.000	0.816	1.500	1.732	0.577	0.500	1.732
Grp/CC Mean	5.000	5.000	3.833	4.500	4.500	6.200	4.800	3.000	6.400	4.800	4.200	4.000	2.800
Grp/CC Variance	2.400	3.000	0.967	0.700	2.700	1.700	2.200	4.000	0.800	3.200	2.200	1.500	1.200
Grp/CC Std Dev	1.549	1.732	0.983	0.837	1.643	1.304	1.483	2.000	0.894	1.789	1.483	1.225	1.095
Sen Leader Mean	5.500	5.444	4.200	4.600	4.500	5.667	5.111	2.556	5.889	4.125	4.778	4.333	3.556
Sen Leader Variance	2.056	2.028	1.956	0.711	1.833	4.000	4.611	2.528	1.611	3.554	1.694	1.000	2.528
Sen Leader Std Dev	1.434	1.424	1.398	0.843	1.354	2.000	2.147	1.590	1.269	1.885	1.302	1.000	1.590
Sq/CC Mean	4.833	4.444	5.471	4.294	4.563	6.444	5.000	2.444	5.647	4.588	4.000	5.294	5.438
Sq/CC Variance	5.794	5.203	1.890	1.721	2.529	2.144	4.941	2.850	2.243	4.132	3.375	2.096	1.729
Sq/CC Std Dev	2.407	2.281	1.375	1.312	1.590	1.464	2.223	1.688	1.498	2.033	1.837	1.448	1.315
Position T-Test	0.367	0.176	0.034	0.468	0.916	0.320	0.902	0.869	0.669	0.585	0.224	0.060	0.009
C-130 Mean	5.125	4.563	5.400	4.533	4.533	6.313	4.813	2.688	5.733	4.143	4.400	4.800	5.000
C-130 Variance	4.650	5.329	1.829	1.552	2.981	2.363	4.963	3.829	1.781	4.440	3.114	1.743	2.143
C-130 Std Dev	2.156	2.308	1.352	1.246	1.727	1.537	2.228	1.957	1.335	2.107	1.765	1.320	1.464
KC-135 Mean	5.000	5.000	4.455	4.273	4.500	6.000	5.800	2.100	5.700	5.100	4.000	5.200	4.333
KC-135 Variance	5.000	3.111	2.673	1.218	1.389	4.000	2.622	0.989	2.678	2.544	2.889	2.400	4.250
KC-135 Std Dev	2.236	1.764	1.635	1.104	1.179	2.000	1.619	0.994	1.636	1.595	1.700	1.549	2.062
MWS T-Test	0.886	0.591	0.134	0.579	0.955	0.679	0.205	0.323	0.958	0.219	0.577	0.512	0.411

Appendix C. Round Two Questionnaire

Questionnaire Two: Measuring the Effectiveness of Total Force Integration Units

You are receiving this questionnaire as a current or former squadron, group, or wing commander of a Total Force Integration (TFI) unit, administratively or operationally. The purpose of this research is to conduct a qualitative study in an effort to ascertain the effectiveness of the current metrics and construct as well as provide recommendations for updated metrics, unity of command issues, and deliberate force development. By responding, you have the unique opportunity to influence and shape the future of Air Force Total Force Integration Associations.

Survey Process: This questionnaire is an instrument of a Delphi study, in which a set of questionnaires is designed to focus on problems, opportunities, solutions or forecasts. Each questionnaire is developed based on the group results of the previous questionnaire. The process continues until the research question is ultimately answered, for example, when consensus is reached, or sufficient information has been exchanged. This on average takes three to four rounds with the panel. This round is considerably shorter and less time-consuming than the initial questionnaire. Your continued participation is essential, however, by no means mandatory.

Benefits and risks: There are no personal risks for participating in this study, and only the benefit of improving the Air Force's execution of the TFI Active Associate construct. There was a significant upfront time investment with the first questionnaire for this study. I appreciate your time, and your extremely thorough and forthright responses. Your participation in completing the questionnaire for this round should take approximately 15 minutes.

Confidentiality: Questionnaire responses are completely confidential. At the end of the questionnaire, you may include your contact information for follow-up. If you choose to do so, rest assured your identity will remain confidential. My final research report will not tie your identity with any responses you provide, as only aggregate data will be published. If you would like to be listed in the acknowledgments section of my final paper, please indicate so at the end of the questionnaire.

Voluntary consent: Your participation in this study is completely voluntary. You have the right to decline to answer any question, to refuse to participate or to withdraw at any time, without penalty. Completion of the questionnaire implies your consent to participate.

Thank you for your participation in this research. Again, I sincerely appreciate your time and forthright responses.

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Did you provide inputs to the first questionnaire regarding TFI?	YES	NO
If NO: Thank you for attempting to participate in this survey. Due to the nature of the research methodology, participation in the second survey is predicated on participation in the first survey.		

Demographic Information

Which Service Component are you a member of?				AD	AFRC	ANG
Which TFI unit did you command?						
Which MWS(s) was associated with your unit?	C-5	C-17	C-40	C-130	KC-10	KC-135
Overall Level of Association:			Det	Sqd	Group	Wing

Before You Begin

Sometime between the development, distribution, and analysis of Questionnaire One, AMC revised some of its TFI Objectives and Measures of Merit. The table below shows AMC's Stated Objectives and Measures of Merit at the start of this research as well as AMC's Updated/Current Objectives and Measures of Merit.

Metrics highlighted in red were removed on the updated metrics.

Metrics highlighted in yellow were slightly modified from the original to the updated metrics (highlighted on both sets for comparison).

Green highlights are completely new additions to the metrics.

Some Measures of Merit were simply realigned under different Objectives.

This information is provided strictly for your knowledge and reference for the questions that follow. I would recommend printing this page before proceeding.

AMC's Objectives & Measures of Merit at Start of Research	AMC's Updated Objectives & Measures of Merit
Objective 1: Access to Iron (Active Duty flying ARC aircraft for training and deployments)	Objective 1: Access to Combat Capabilities
MoM 1.1: Mission Capable Rates	MoM 1.1: Aircraft Availability to CAAP
MoM 1.2: ARC Utilization Rates	MoM 1.2: Aircrew/Mx UTCs Available for MAF Operations
Objective 2: Increase Availability to Support Combat and Training Requirements (additional ARC aircraft are made available to support deployed and training missions. Dwell to deploy rates at active associate units should be on par with their counterparts at non-active associate units.)	MoM 1.3: Associate Unit members on Individual Deployments
MoM 2.1: Maintain Parity for AD Deploy-to-Dwell Rates and Mx Deploy to Dwell Rates	Objective 2: Balance Aircrew/Mx Experience Levels Across the Total Force
MoM 2.2: ARC Volunteerism	MoM 2.1: Inexperienced Aging Rates for Ops
MoM 2.3: Daily ARC Aircraft Deployed to Combatant Command	MoM 2.2: Inexperienced Aging Rates for Mx
MoM 2.4: Operations/Mx Temporary Duty (Avg Days/Year)	MoM 2.3: Associate Flying Hour Burn Down
Objective 3: Balance Aircrew Maintenance (Mx) Experience Level Across the Total Force (Individuals assigned to active associate squadrons should gain experience and upgrade at the same or better than their counterparts in a regular active duty flying organization.)	Objective 3: Increase Availability to Support Combat & Training requirements
MoM 3.1: Inexperienced Aging Rates for Ops	MoM 3.1: Maintain parity for AD Deploy-to-Dwell Rates
MoM 3.2: Inexperienced Aging Rates for Mx	MoM 3.2: Daily Avg ARC A/C Deployed to GCC
Objective 4: Preserve Professional Development (Being assigned to a TFI unit should afford Airmen equal opportunities to meet their professional development gates as well as or better than their counterparts at non-active associations.)	MoM 3.3: Ops/Mx TDY (Avg Days/Yr)
MoM 4.1: Advanced Academic Degree Completion	Objective 4: Preserve Professional Development
MoM 4.2: Professional Military Education Completion	MoM 4.1: AAD Completion
MoM 4.3: Retention Rates	MoM 4.2: PME Completion
MoM 4.4: Enlisted Promotion Rates	MoM 4.3: Enlisted Retention Rates
	MoM 4.4: Enlisted Promotion Rates

Instructions

A typical Delphi study gives the participants statistical feedback for each question when trying to reach consensus in the next round. A thorough statistical analysis was conducted on the answers you provided based on component, position held, and MWS. Nearly all responses fell within one standard deviation from the mean, which generally hovered in the neutral to slightly agree area of response. The comments you provided, however, proved to be invaluable and far from neutral. Therefore, I have opted not to provide the statistical information for each question. The few areas where statistical significance was found coupled with your comments as well as some of my thoughts/ideas on TFI drove the structure of this current survey.

The following pages contain:

- 1) proposed clarification to AMC Objectives;
- 2) proposed Measures of Merit for each Objective;
- 3) proposed opportunities to reduce Unity of Command issues; and
- 4) proposed recommendations for additional Force Development.

Please rate whether or not you agree with each proposal independently. For any statement of disagreement, please annotate why and provide a better recommendation.

Objectives and Measures of Merit

AFI 90-1001 AFGM 2014-01 para 1 states "Associations provide surge and rotational capacity of combat power, enhanced training, and more efficient operations. Components will associate to improve productivity, increase or retain mission capabilities, and/or to achieve synergy in the use of Total Force equipment, manpower, and infrastructure."

We currently lump all AD/ANG/AFRC marriages under one umbrella called associations; however, these associations are ill-defined and fall across a broad spectrum. Some units only share aircraft and a runway, some are loosely associated, and only a limited few are actually integrated. A more appropriate description of the end goal may be to call these Total Force Partnerships. Webster's 1913 Dictionary defines a partnership as "an alliance or association of persons for the prosecution of an undertaking." Furthermore, an association is defined as "a social or business relationship; a relation resulting from interaction or dependence" and integrated is defined as "having different groups treated together as equals in one group." In order for any partnership to be successful, it is imperative to establish effective communication and for each partner to find value in the union with shared priorities/goals/interests. Much like the spectrum of conflict, Total Force Partnerships bridge a vast spectrum.

A new perspective may be to continue utilizing some units that are only co-located, sharing iron but continue to have distinct missions and wing structures, much like the current Classic Associate and governed by MOAs/MOUs. The next level of partnership would be associated units, who are focused on preserving capacity, absorption, and seasoning. To round out the spectrum, fully integrated partnerships would focus on deployable, fully mission capable assets.

The bottom line is that we cannot measure the effectiveness of these partnerships, unless we clearly define the objectives of each type of partnership. It is imperative that it be acceptable for those objectives to be different. That is where we will begin to see the real value of the Total Force.

Please evaluate the following Objectives and Measures of Merit based on the concept of Total Force Partnerships as described above.

Do you Agree or Disagree with Objective 1 listed below and its subsequent measures of merit by association type?	AGREE	DISAGREE
If you disagree with this objective or any of its subsequent measures of merit, please state what you disagree with and why.		

Co-Located Partnerships	Associated Partnerships	Integrated Partnerships
Objective 1: Shared Utilization of Aircraft (AD flying ARC aircraft in order to accomplish the full spectrum of national missions and objectives as well as training, meanwhile extending the life of AD assigned aircraft and minimizing underutilization of ARC assigned aircraft)	Objective 1: Shared Utilization of Aircraft (AD flying ARC aircraft in order to accomplish the full spectrum of national missions and objectives as well as training, meanwhile extending the life of AD assigned aircraft and minimizing underutilization of ARC assigned aircraft)	Objective 1: Shared Utilization of Aircraft (AD flying ARC aircraft in order to accomplish the full spectrum of national missions and objectives as well as training, meanwhile extending the life of AD assigned aircraft and minimizing underutilization of ARC assigned aircraft)
MoM 1.1: Aircraft Availability to COMAFFOR Apportionment and Allocation Process (CAAP)	MoM 1.1: Aircraft Availability to COMAFFOR Apportionment and Allocation Process (CAAP)	MoM 1.1: Aircraft Availability to COMAFFOR Apportionment and Allocation Process (CAAP)
MoM 1.1.1: Mission Capable Rates	MoM 1.1.1: Mission Capable Rates	MoM 1.1.1: Mission Capable Rates
MoM 1.1.2: Total Not Mission Capable for Maintenance	MoM 1.1.2: Total Not Mission Capable for Maintenance	MoM 1.1.2: Total Not Mission Capable for Maintenance
MoM 1.1.3: Total Not Mission Capable for Supply	MoM 1.1.3: Total Not Mission Capable for Supply	MoM 1.1.3: Total Not Mission Capable for Supply
MoM 1.2: Acft Utilization Rates (should be higher than non-associated units)	MoM 1.2: Acft Utilization Rates (should be higher than non-associated units)	MoM 1.2: Acft Utilization Rates (should be higher than non-associated units)
MoM 1.2.1: Acft Utilization Rate by AD (component utilization should be comparable or lower than non-associated AD units)	MoM 1.2.1: Acft Utilization Rate by AD (component utilization should be comparable or lower than non-associated AD units)	
MoM 1.2.2: Acft Utilization Rate by ARC (component utilization should be comparable to non-associated ARC units)	MoM 1.2.2: Acft Utilization Rate by ARC (component utilization should be comparable to non-associated ARC units)	
MoM 1.3: Mission Effectiveness Rate (comparable to non-associated unit)	MoM 1.3: Mission Effectiveness Rate (comparable or slightly higher than non-associated units if taking advantage of ARC experience)	MoM 1.3: Mission Effectiveness Rate (should be higher than non-associated units if taking advantage of ARC experience)

Do you Agree or Disagree with Objective 2 listed below and its subsequent measures of merit by association type?	AGREE	DISAGREE
If you disagree with this objective or any of its subsequent measures of merit, please state what you disagree with and why.		

Co-Located Partnerships	Associated Partnerships	Integrated Partnerships
	Objective 2: Increase Personnel Availability to Support Combat & Training requirements	Objective 2: Increase Personnel Availability in order to accomplish the full spectrum of national missions and objectives as well as training
	MoM 2.1: Maintain Combat/ Mission Ready Status for Ops and Deployment Ready Status for Mx (as measured by Unit Readiness via ARTS/SORTS)	MoM 2.1: Maintain Combat/ Mission Ready Status for Ops and Deployment Ready Status for Mx (as measured by Unit Readiness via ARTS/SORTS)
	MoM 2.2: Maintain parity for AD Deploy-to-Dwell Rates (associated AD members would be tasked to deploy independently from Host Wing)	MoM 2.3: Sustain Desired Dwell Time (airframe dependent, preferably lower than AD, but slightly above traditional ARC units)
	MoM 2.3: Associate Unit members on Individual Deployments	

Do you Agree or Disagree with Objective 3 listed below and its subsequent measures of merit by association type?	AGREE	DISAGREE
If you disagree with this objective or any of its subsequent measures of merit, please state what you disagree with and why.		

Co-Located Partnerships	Associated Partnerships	Integrated Partnerships
	Objective 3: Balance Experience Levels Across the Total Force	Objective 3: Balance Experience Levels Across the Total Force
	MoM 3.1: Seasoning Rates for Ops (should be on par or take less time than non-associated units)	MoM 3.1: Seasoning Rates for Ops (should be on par or take less time than non-associated units)
	MoM 3.1.1: Target Rate for CP to AC Upgrade (should be on par or take less time than non-associated units)	MoM 3.1.1: Target Rate for CP to AC Upgrade (should take less time than non-associated units)
	MoM 3.1.2: Target Rate for AC/FE/LM/BO to Instructor	MoM 3.1.2: Target Rate for AC/FE/LM/BO to Instructor
	MoM 3.2: Seasoning Rates for Mx (should be on par or take less time than non-associated units)	MoM 3.2: Seasoning Rates for Mx (should take less time than non-associated units)
	MoM 3.2.1: Target Rate for 3 to 5 Level Upgrade (should be on par or take less time than non-associated units)	MoM 3.2.1: Target Rate for 3 to 5 Level Upgrade (should take less time than non-associated units)
	MoM 3.2.2: Target Rate for 5 to 7 Level Upgrade (should be on par or take less time than non-associated units)	MoM 3.2.2: Target Rate for 5 to 7 Level Upgrade (should take less time than non-associated units)
	MoM 3.3: Monitor Associate Flying Hour Burn Down (use in-conjunction with Seasoning Rates and MC rates)	

Do you Agree or Disagree with Objective 4 listed below and its subsequent measures of merit by association type?	AGREE	DISAGREE
If you disagree with this objective or any of its subsequent measures of merit, please state what you disagree with and why.		

Co-Located Partnerships	Associated Partnerships	Integrated Partnerships
	Objective 4: Enhance Professional Development	Objective 4: Enhance Professional Development
	MoM 4.1: Total Force Retention Rates (track transition to ARC compared to non-associated units)	MoM 4.1: Total Force Retention Rates (track transition to ARC compared to non-associated units)
		MoM 4.2: Senior Enlisted Promotion Rates (maintain parity with mbrs of non-associated units)
		MoM 4.3: Enlisted Selected for Special Duty Assignments (maintain parity with mbrs of non-associated units)
		MoM 4.5: IDE Officer Selection (maintain parity with mbrs of non-associated units)
		MoM 4.5: Officer Career Development Above Sq Level (best fit regardless of component, dual fill if best meets unit/msn needs)

Unity of Command Issues

In the previous questionnaire, you were asked if a Dual Status Commander (DSC) would be beneficial for more efficient and effective TFI mission execution. Upon further research, a DSC as currently defined by doctrine is probably not the right answer, although it certainly has necessity in today's force structure. Instead, I would like to propose the idea of a Dual Component Commander (DCC). This would be a Wing Commander, who has both ADCON and OPCON over all personnel assigned to his wing. The DCC would be responsible for assigning the right mix of personnel to accomplish any and all tasked missions within current regulating guidance. He would also be responsible for all administrative actions, to include representation on professional development/promotion boards, as well as disciplining forces. With regard to the disciplining forces, the DCC would be responsible for disciplining personnel in accordance with the duty status the individual was in at the time of infraction regardless of the duty status held by the commander or individual at the time the disciplinary action is administered.	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
If a single active associate host wing chain of command cannot be established for integrated Total Force units, would you support having two O-6 vice wing commanders (one ARC and one AD)? Under this construct, all AD personnel would be assigned to their AFSC specific squadron, as opposed to the current construct under the AD Ops Sq CC. The AD Vice Wing CC would be administratively responsible for all AD members assigned to the wing while operationally working for the host ARC Wing CC to effectively execute the Wing's mission. Administrative responsibilities include those normally associated with AD Senior Rater responsibilities.	AGREE	DISAGREE

If you disagree with this recommendation, please state a reason why.		
A large cultural difference between the AD and the ANG is the growing of people and building of leadership teams. Leadership is crucial to the success of any organization, arguably even more so in a Total Force Partnership. The ARC should have an equal part in the selection of the AD leaders joining their team.	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		

Force Development Issues

ARC Wing Commanders of Total Force units should have equitable input in Phoenix Eagle, promotion, and developmental education selection processes as their AD counterparts.	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
First ASSIGNMENT airmen should not be assigned to associated or integrated partnership units. First TERM airmen, after serving some time at an AD base, would adjust easily back to a traditional AD unit after serving in a partnership unit.	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
Distance learning opportunities currently only open to ARC personnel should also be afforded to AD personnel assigned to partnership units. One example currently available to the ARC but not AD is Airman Leadership School by correspondence.	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
The use of Special Experience Identifiers (SEIs) for maintenance personnel should be reinstated. This would aid in the manpower experience balancing. For example, this would prevent a 7-level TSgt from one airframe from starting over as a 3-level on a new airframe. From a rank viewpoint under the current system, it looks like appropriate personnel are assigned to a unit, however, from a task completion viewpoint, this is a significant strain on maintenance operations when personnel transfer between airframes.	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
I support the implementation of the use SEIs to track the progression of personnel assigned to various types of partnerships (similar to what is currently done for officers on a RAS/PAS track). This could have multiple future benefits. Identification of first-hand Total Force experience may be desired for future command or staff opportunities. Additionally, this SEI would aid in future analysis to determine if an assignment at a Total Force unit impacts career progression.	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		

Additional Items for Consideration

If a Total Force Breakout Session were to be added to the current AMC Commander's Course for both AD and ARC personnel, what topics would be beneficial as a new commander of an associated unit? (Please select all that apply)		
<p>Command Relationships</p> <p>What is Title 32 and what does it mean to an AD member?</p> <p>Common Duty Status (and associated issues such as Discipline, Pay/Overtime, Role of a Technician, etc.)</p> <p>Promotion/Evaluation System (Differences in what is emphasized/valued)</p> <p>Mobilization of ANG for Federal and State Missions</p> <p>ARC Deployment Rates with a Projected Schedule</p> <p>VTC Panel with Previous TFI Sq CCs</p> <p>Other (Please Specify)</p>		
A baseline Cost-of-Living-Allowance (COLA) for high living expense areas and/or an individually assessed allowance based on location, rank and family composition to offset costs for things such as lack of on-base dining facilities, lack of on-base gym facilities, or lack of on-base childcare would reduce strain on AD members assigned to certain localities. For example, a SSgt with two children needing childcare would receive a different allowance than a single A1C, who would normally live in the dorms and eat at a base dining facility.	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
Members from every component have questioned the value/benefit of Total Force units. Please select all you believe to be actual or potential benefits of TF units and include any other benefits you have observed.	AGREE	DISAGREE
<p>Balancing of Aircraft Utilization (extending life cycle of AD assigned aircraft, minimizing underutilization of ARC assigned aircraft)</p> <p>AD members (and future leaders) gain a better understanding of the strengths of the ARC and their contribution to national defense</p> <p>Once associated, increased protection from mission changes to ARC units</p> <p>AD members provide additional daily manpower to ARC units</p> <p>Additional source of funding for ARC units when AD assigned</p> <p>Exposure to a broader mission set and enhanced training/experience for AD members</p> <p>Increased Total Force retention rates</p> <p>Other (Please Specify)</p>		
Currently, all AD CONUS bases for KC-10s, KC-135s, C-17s, and C-130s have simulators co-located on their installation. Along with a significant increase in the number of semi-annual requirements to be accomplished with minimal or no increase in assigned aircraft, comparing seasoning rates for associated units without access to simulators is extremely inconsistent. Active associations should gain a simulator if the expectation for training is to remain on par with or better than non-associated AD units.	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		

UMD Changes

While balancing force experience in maintenance is a primary TFI objective, it is imperative to remember a vast majority of the ANG experience lies in its traditional force. Therefore, the right balance of skills levels is needed to prevent crippling both the base operating support and maintenance operations while still garnering the knowledge and experience the ARC force has to offer. In order to adequately support the addition of 12 flight crews and 4 aircraft**, the following support package is recommended (grouped functionally for requirement analysis):

**If aircraft are not added with the integration of crews, the maintenance package can be tailored down. However, the additional use of the aircraft still mandates a robust maintenance package be included.

Operations Sq Commander, Director of Operations, First Sergeant (8F000), Chief Enlisted Advisor (Sq Superintendent)	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
Financial Management/Comptroller Journeyman (6F051), Personnel Journeyman (3S051), Knowledge Operations Management Journeyman (3D051);	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
Airfield Management Craftsman (1C771), Airfield Management Journeyman (1C751); Command Post Craftsman x2 (1C371), Command Post Journeyman x3 (1C351), Aviation Resource Management Craftsman (1C072), Aviation Resource Management Journeyman x2 (1C052), Aviation Resource Management Apprentice (1C032), Intelligence x2 (14N3), Operations Intel Journeyman x2 (1N051), Education & Training Journeyman (3S251), Parachutist/Survival/Evasion/Resistance Journeyman (J1T051), Aircrew Flight Equipment Craftsman (1P071), Aircrew Flight Equipment Journeyman x3 (1P051), Aircrew Flight Equipment Apprentice x2 (1P031), Cyber Systems Operations Journeyman (3D052);	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
Logistics Plans Journeyman x2 (2G051), Fuels Journeyman x2 (2F051), Materiel Management Journeyman (2S051), Air Transportation Journeyman x2 (2T251);	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
Flight Safety Officer, Weapons Officer x2, Stan/Eval (1 per crew position);	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		

Aircraft Maintenance Officer (21A3)	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
Aerospace Maintenance Craftsman x4 (2A571), Aerospace Maintenance Journeyman x22 (2A551), Aerospace Maintenance Apprentice x4 (2A531), Aircraft Electrical & Environmental Craftsman (2A676), Aircraft Electrical & Environmental Journeyman x2 (2A656), Aircraft Electrical & Environmental Apprentice (2A636), Aircraft Hydraulic System Journeyman x3 (2A655), Aircraft Hydraulic System Apprentice (2A635), Aerospace Propulsion Journeyman x7 (2A651), Aerospace Propulsion Apprentice (2A631),	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
Integrated Avionics System Journeyman x2 (2A553A), Integrated Avionics System Apprentice x2 (2A533A), Integrated Avionics System Journeyman x4 (2A553B), Integrated Avionics System Craftsman (2A573C), Integrated Avionics System Journeyman x3 (2A553C), Aircraft Structural Maintenance Journeyman x3 (2A753), Aircraft Structural Maintenance Apprentice (2A733),	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		
Aircraft Metals Technology Journeyman (2A751), Aerospace Ground Equipment Journeyman x4 (2A652), Aerospace Maintenance Journeyman x4 (2A551), Aerospace Maintenance Apprentice (2A531B), Aerospace Maintenance Craftsman (for Quality Assurance) x3 (2A571)	AGREE	DISAGREE
If you disagree with this recommendation, please state a reason why.		

Thank you for your participation. I know your time is valuable, and I appreciate your willingness to assist in my research and enhance the future of TFI associations.

Please provide any additional comments or elaborate on previous answers here.		
I would like to be included in the acknowledgments section of the final report.	YES	NO
If so, please provide contact information here.		
OPTIONAL: If you would like to provide your name and contact information or follow-up purposes only, please do so here. Your identity and participation in this study will remain confidential.		

Appendix D. Likert-Type Scale Response Anchors

Level of Acceptability <ul style="list-style-type: none"> 1 – Totally unacceptable 2 – Unacceptable 3 – Slightly unacceptable 4 – Neutral 5 – Slightly acceptable 6 – Acceptable 7 – Perfectly Acceptable 	My beliefs <ul style="list-style-type: none"> 1 – Very untrue of what I believe 2 – Untrue of what I believe 3 – Somewhat untrue of what I believe 4 – Neutral 5 – Somewhat true of what I believe 6 – True of what I believe 7 – Very true of what I believe 	Level of Support/Opposition <ul style="list-style-type: none"> 1 – Strongly oppose 2 – Somewhat oppose 3 – neutral 4 – Somewhat favor 5 – Strongly favor
Level of Appropriateness <ul style="list-style-type: none"> 1 – Absolutely inappropriate 2 – Inappropriate 3 – Slightly inappropriate 4 – Neutral 5 – Slightly appropriate 6 – Appropriate 7 – Absolutely appropriate 	Priority: <ul style="list-style-type: none"> 1 – Not a priority 2 – Low priority 3 – Somewhat priority 4 – Neutral 5 – Moderate Priority 6 – High priority 7 – Essential priority 	Level of Probability <ul style="list-style-type: none"> 1 – Not probable 2 – Somewhat improbable 3 – Neutral 4 – Somewhat probable 5 – Very probable
Level of Importance <ul style="list-style-type: none"> 1 – Not at all important 2 – Low importance 3 – Slightly important 4 – Neutral 5 – Moderately important 6 – Very important 7 – Extremely important 	Level of Concern <ul style="list-style-type: none"> 1 – not at all concerned 2 – Slightly concerned 3 – Somewhat concerned 4 – Moderately concerned 5 – Extremely concerned 	Level of Agreement <ul style="list-style-type: none"> 1 – Strongly disagree 2 – Disagree 3 – Neither agree or disagree 4 – Agree 5 – Strongly agree
Level of Agreement <ul style="list-style-type: none"> 1 – Strongly disagree 2 – Disagree 3 – Somewhat disagree 4 – Neither agree or disagree 5 – Somewhat agree 6 – Agree 7 – Strongly agree 	Priority Level <ul style="list-style-type: none"> 1 – Not a priority 2 – Low priority 3 – Medium priority 4 – High priority 5 – Essential 	Level of Desirability <ul style="list-style-type: none"> 1 – Very undesirable 2 – Undesirable 3 – neutral 4 – Desirable 5 – Very desirable
Knowledge of Action <ul style="list-style-type: none"> 1 – Never true 2 – Rarely true 3 – Sometimes but infrequently true 4 – Neutral 5 – Sometimes true 6 – Usually true 7 – Always true 	Level of Problem <ul style="list-style-type: none"> 1 – Not at all a problem 2 – Minor problem 3 – Moderate problem 4 – Serious problem 	Level of Participation <ul style="list-style-type: none"> 1 – No, and not considered 2 – No, but considered 3 – Yes
Reflect Me? <ul style="list-style-type: none"> 1 – Very untrue of me 2 – Untrue of me 3 – Somewhat untrue of me 4 – Neutral 5 – Somewhat true of me 6 – True of me 7 – Very true of me 	Affect on X <ul style="list-style-type: none"> 1 – No affect 2 – Minor affect 3 – Neutral 4 – Moderate affect 5 – Major affect 	Frequency – 5 point <ul style="list-style-type: none"> 1 – Never 2 – Rarely 3 – Sometimes 4 – Often 5 – Always
	Level of Consideration <ul style="list-style-type: none"> 1 – Would not consider 2 – Might or might not consider 3 – Definitely consider 	Frequency <ul style="list-style-type: none"> 1 – Never 2 – Rarely 3 – Occasionally 4 – A moderate amount 5 – A great deal
		Frequency of Use <ul style="list-style-type: none"> 1 – Never 2 – Almost never 3 – Occasionally/Sometimes 4 – Almost every time 5 – Every time

<p>Frequency – 7 point</p> <ul style="list-style-type: none"> 1 – Never 2 – Rarely, in less than 10% of the chances when I could have 3 – Occasionally, in about 30% of the chances when I could have 4 – Sometimes, in about 50% of the chances when I could have 5 – Frequently, in about 70% of the chances when I could have 6 – Usually, in about 90% of the chances I could have. 7 – Every time <p>Amount of Use</p> <ul style="list-style-type: none"> 1 – Never use 2 – Almost never 3 – Occasionally/Sometimes 4 – Almost every time 5 – Frequently use <p>Level of Familiarity</p> <ul style="list-style-type: none"> 1 – not at all familiar 2 – Slightly familiar 3 – Somewhat familiar 4 – Moderately familiar 5 – Extremely familiar <p>Level of Awareness</p> <ul style="list-style-type: none"> 1 – not at all aware 2 – Slightly aware 3 – Somewhat aware 4 – Moderately aware 5 – Extremely aware 	<p>Level of Difficulty</p> <ul style="list-style-type: none"> 1 – Very difficult 2 – Difficult 3 – Neutral 4 – Easy 5 – Very easy <p>Likelihood</p> <ul style="list-style-type: none"> 1 – Extremely unlikely 2 – unlikely 3 – Neutral 4 – likely 5 – Extremely likely <p>Level of Detraction</p> <ul style="list-style-type: none"> 1 – detracted very little 2 – 3 – Neutral 4 – 5 – Detracted very much <p>Good / Bad</p> <ul style="list-style-type: none"> 1 – Very negative 2 – 3 – Neutral 4 – 5 – Very positive <p>Barriers</p> <ul style="list-style-type: none"> 1 – Not a barrier 2 – Somewhat of a barrier 3 – Moderate barrier 4 – Extreme barrier <p>Level of Satisfaction – 5 point</p> <ul style="list-style-type: none"> 1 – Very dissatisfied 2 – dissatisfied 3 – unsure 4 – satisfied 5 – Very satisfied 	<p>Level of Satisfaction – 5 point</p> <ul style="list-style-type: none"> 1 – Not at all satisfied 2 – slightly satisfied 3 – moderately satisfied 4 – Very satisfied 5 – Extremely satisfied <p>Level of Satisfaction – 7 point</p> <ul style="list-style-type: none"> 1 – Completely dissatisfied 2 – Mostly dissatisfied 3 – Somewhat dissatisfied 4 – neither satisfied or dissatisfied 5 – Somewhat satisfied 6 – Mostly satisfied 7 – Completely satisfied <p>Level of Quality – 5 point</p> <ul style="list-style-type: none"> 1 – Poor 2 – Fair 3 – Good 4 – Very good 5 – Excellent <p>Comparison of Two Products</p> <ul style="list-style-type: none"> 1 – much worse 2 – somewhat worse 3 – about the same 4 – somewhat better 5 – much better <p>Level of Responsibility</p> <ul style="list-style-type: none"> 1 – Not at all responsible 2 – somewhat responsible 3 – mostly responsible 4 – completely responsible <p>Level of Influence</p> <ul style="list-style-type: none"> 1 – not at all influential 2 – slightly influential 3 – somewhat influential 4 – very influential 5 – extremely influential
(Vagias, 2006)		

Appendix E. Acronyms

AAD – Advanced Academic Degree	NGT – Nominal Group Think
AD – Active Duty	OPCON – Operational Control
ADCON – Administrative Control	OPS – Operations
AFGM – Air Force Guidance Memorandum	OPSTEMPO – Operations Tempo
AFI – Air Force Instruction	PAS – Personnel Accounting Symbol
AFRC – Air Force Reserve Component	PERSTEMPO – Personnel Tempo
AMC – Air Mobility Command	PME – Professional Military Education
ANG – Air National Guard	RegAF – Regular Air Force (Active Duty)
ARC – Air Reserve Component	SRID – Senior Rater Identification
AS – Airlift Squadron	TF – Total Force
AW – Airlift Wing	TFI – Total Force Integration
CCDR – Combatant Commander	TFIA – Total Force Initiative Associations
CONUS – Continental United State	UCMJ – Uniform Code of Military Justice
IAW – In accordance with	UMD – Unit Manning Document
MX – Maintenance	UTA – Unit Training Assemblies
MOA – Memorandum of Agreement	UTC – Unit Type Code
MOU – Memorandum of Understanding	UTE – Utilization
MWS – Major Weapons System	

Appendix F. Summary Slide



Measuring the Effectiveness of Active Associate TFI Units

Insufficient objectives and measures of merit, an absence of unity of command between Title 10 and Title 32 authorities, the Air Mobility Command (and, therefore, the Air Force) is not realizing the full potential of the Total Force Enterprise due to:



Introduction

Total Force Integration Associations are "CSAF-approved operational constructs, which organize, train, and equip Air Force forces."

The 2014 NCMA² stated "Classroom and Active Association units have not achieved their full potential because they continue to conform to a dual chain of command. This unnecessarily increases overhead and creates, at least, the potential for divided loyalties that hold back the development of trust that should characterize a well-led and tightly bonded unit."

As the needs of the Air Force change, the metrics used to measure performance need to be monitored and adjusted to ensure they remain relevant to current goals and objectives.

When evaluating the effectiveness of active associate TFI units, it is imperative to meet the requirements of both the AD and ARC missions, as well as professional needs of the individual airmen assigned to integrated units.

Strategic and Tactical Alignment

Redefine Total Force units as Total Force Partnerships. To clearly determine whether a partnership is effective, the objectives specific to each type of partnership must be defined. Adopting a varying approach to objectives and subsequent measures of merit will help propel AACC towards optimizing the potential of its Total Force Enterprise.



Analysis, Conclusions, and Recommendations

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1. Objectives and Methods

- a. Document the extent and nature of each claim in the report generating dataset (as detailed, summarized, or categorized), and provide the following information in the table that must be included in order to maintain confidentiality for sensitive purposes:
 - i. Adapt a user naming document with a standard specification template and incorporate system-dependent naming conventions to represent a relative user operation sequence, which may be passed to the Data Wranglery Application.
 3. Typing of Command
 - a. Assign a Data-Capability Command (not a Data-Class Command) with unique ADOXX and ORCXX responsibility of all unique operations.
 - b. Make Data Wranglery Commanders an integral part of the subdomain command solution process.
 - c. Current ADO user length is "Total Ports with a binary (yes/no) 24-110" and Data with binary more or less/more/less.
 3. Professional Development
 - a. Allow Data Wranglery Commanders to be held responsible for the Admin assigned to their work, in order to represent the Data Admin as professional development process.
 - b. Document the use of Special Typing/Command Identifiers (SITs) for maintenance personnel.
 - c. Include the use of SITs for all personnel assigned in a Total Ports with.
 - d. List initial Port Assignment (not First Term) Admin for a Total Ports with and Data with binary more or less/more/less?
 4. Open currently ADO-related dataset having operations in personnel, with the personnel that all personnel regardless of assignment must be provided (related to the minimum count/policy).
 5. Add a Total Ports Breakdown (not just as how long binary) in the ADO Commanders' Course.
4. Technical Issues
- a. Develop a web-based, interactive, secured Commanding-Access based on location, work, and family composition.
- b. Assign a commander of Total Ports function (or more) an increase in number of hours assigned with an adequate increase in command personnel.

Significance

One of the biggest hurdles of the Total Force Compact is trying to integrate disparate functions into cohesive partnerships. Ongoing Total Force partnerships across a spectrum may serve to optimize the effectiveness of these units. For Total Force partnerships to be successful, each participant must find common values in the union with shared priorities/goals/interests. This research highlights one of the greatest benefits of Total Force partnerships: exposure affords both AD and AUC members the opportunity to gain sound understanding of the strengths of each component and their unique contributions to the defense of our nation. Future leaders will be better equipped to implement sound policies and procedures based on best practices learned and observed through working in the intimate confines of Total Force partnerships.

Methodology

A two question Delphi study was conducted to answer the investigative questions of this research. Panelists consisted of former and sitting ITI squadron members, and wing commanders from all three Air Force components.

Panel member responses were analyzed first as a whole focusing on mean, variance, and standard deviation. Results were further broken down by component level of the position held as a commander, and weapon system. These sub-group means were compared to the sample mean, then analyzed with a T-test to determine statistical relevance.

Implications

Total Force units are the future of the US Air Force. Secretary of the Air Force Deborah James continues to advocate for a stronger Total Force with the conviction the future of the Air Force includes greater reliance on the Air National Guard and Air Force Reserves (Air Force News Contributions, 2015).

The KC-45 tanker will be online within the next year. Every proposed KC-45 squadron is slated as an associated unit of one form or another. It is imperative to the health of our force to revise and implement this concept properly.

Future Research

- Is the Guard and Reserve still regarded as a strategic reserve? If not, can associations truly provide strategic and rotational capacity as outlined in AFM-80-100?
- Explicitly: Dual Component Commander, with well defined roles and responsibilities, as well as the necessary changes to current law to legally bestow those responsibilities.
- Should they integrated Total Force unit deploy to overseas rates all somewhere between a traditional AD wing and traditional AIG wing? Is it sustainable?
- Develop a Cost-of-Living Allowance formula with web based implementation for active duty personnel assigned to community-based AIG/Total Force units.
- In 2-3 years assess career progression of individuals assigned to Total Force units.

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Vita

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Air Force Commendation Medal (5 OLC)
Air Force Achievement Medal (1 OLC)
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Global War on Terrorism Service Medal
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